

DOCUMENT RESUME

ED 382 879

CE 069 080

AUTHOR Brown, Patricia, Ed.
TITLE Promoting a Dialogue on School-to-Work Transition.
INSTITUTION National Governors' Association, Washington, DC.
Center for Policy Research.
SPONS AGENCY Pew Charitable Trusts, Philadelphia, PA.
REPORT NO ISBN-1-55877-237-5
PUB DATE 95
NOTE 45p.
AVAILABLE FROM National Governors' Association, 444 North Capitol
Street, Washington, DC 20001-1512.
PUB TYPE Collected Works - General (020)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Academic Education; *Educational Change; Educational
Improvement; *Educational Needs; Educational
Objectives; Educational Planning; Educational Policy;
*Education Work Relationship; Government School
Relationship; Policy Formation; Position Papers;
Postsecondary Education; Public Policy; *School
Business Relationship; Secondary Education;
*Vocational Education

ABSTRACT

This document contains six papers by individuals representing the various stakeholders in the school-to-work transition process, including vocational education, academic education, higher education, and the business sector. The first paper, "The Leadership Challenge: Accommodating Different Perspectives on School to Work" (Tucker), argues for changing the way youth are prepared for work and advocates equipping all students with high academic skills and the ability to use those skills in productive enterprises. The following papers are presented in response to Tucker's paper: "School-to-Work Programs: True Reforms or Tired Retreads?" (Grubb); "School to Work: The Business Perspective" (Perlman); "School-to-Work Transition in the United States" (Stewart); "School to Work: Some Questions for Marc Tucker" (Sizer); and "The Promises and Concerns of School-to-Work Transition" (Anderson). Also included are profiles of the authors. (MN)

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**NATIONAL
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Promoting a Dialogue on School-to-Work Transition

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Promoting a Dialogue on School-to-Work Transition

NATIONAL
GOVERNORS'
ASSOCIATION

Edited by Patricia Brown

Education Policy Studies Division
Center for Policy Research
National Governors' Association

Since their initial meeting in 1908 to discuss interstate water problems, the Governors have worked through the National Governors' Association to deal collectively with issues of public policy and governance. The association's ongoing mission is to support the work of the Governors by providing a bipartisan forum to help shape and implement national policy and to solve state problems.

The members of the National Governors' Association are the Governors of the fifty states, the territories of American Samoa, Guam, and the Virgin Islands, and the commonwealths of the Northern Mariana Islands and Puerto Rico. The association has a nine-member Executive Committee, a Task Force on State Management, and three standing committees—on Economic Development and Commerce, Human Resources, and Natural Resources. Through NGA's committees, the Governors examine and develop policy and address key state and national issues. Special task forces often are created to focus gubernatorial attention on federal legislation or on state-level issues.

The association works closely with the administration and Congress on state-federal policy issues through its offices in the Hall of the States in Washington, D.C. The association serves as a vehicle for sharing knowledge of innovative programs among the states and provides technical assistance and consultant services to Governors on a wide range of management and policy issues.

The Center for Policy Research is the research and development arm of NGA. The center is a vehicle for sharing knowledge about innovative state activities, exploring the impact of federal initiatives on state government, and providing technical assistance to states. The center works in a number of policy fields, including agriculture and rural development, economic development, education, energy and environment, health, information management, social services, trade, training and employment, and transportation. The priorities for the association's research are set by the Governors.

ISBN 1-55877-237-5

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Funding for this publication was provided by The Pew Charitable Trusts.

The responsibility for the accuracy of the analysis and for the judgments expressed lies with the authors; the report does not constitute policy positions of the National Governors' Association, individual Governors, or The Pew Charitable Trusts.

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Preface

Efforts to strengthen the relationship between school and work for youth have crept quietly onto the national scene with a strong chorus of supporters. Brought to the nation's attention in *America's Choice: high skills or low wages!*, the importance of a highly trained workforce in a globally competitive market has become a mantra of American business. Numerous groups, including High Schools That Work, Jobs for America's Graduates, Jobs For the Future, the Manpower Development Research Corporation, the National Alliance for Restructuring Schools, the New Standards Project, and Public-Private Ventures, have promoted school-to-work programs and activities throughout the country for more than a decade. Last year these efforts culminated in the passage of the federal School-to-Work Opportunities Act of 1994, which gives states and communities funding to plan and implement systems of school-to-work transition.

The focus on improving the transition from school to work for American youth developed alongside a major education reform effort to improve student academic achievement without much overlap or dialogue, despite the fact that both education reformers and school-to-work advocates are attempting to change the way schools operate. Each group is proposing different strategies to increase student achievement—raising expectations and increasing exposure to more challenging material, on the one hand, and increasing access to the workplace and real-world problemsolving, on the other. Because these strategies stem from separate areas of concern, these two groups rarely talk to each other.

Each perspective represents a different view of the proverbial elephant. Academic educators see children in schools. Vocational educators see future workers. Employers see young people who are not trained. Parents see a future

adult with a family to support. Yet they are all looking at the same child.

And each has a different fear. Certain education reformers fear that student exposure to new ways of thinking and learning will be sacrificed to practical expediency. Parents fear that their children will be tracked into classes and experiences that limit their future opportunities. Employers fear that schools will continue to send them ill-prepared young workers.

Although all agree that schools need to do a better job and that youth need to be better prepared for life and work, there is significant disagreement on how to accomplish this, particularly in the following areas:

- how students best learn;
- the purpose of schooling;
- the types of knowledge and skills students need;
- the transferability of skills gained through applied instruction;
- the priority given to work-related learning;
- the age at which students should make vocational choices; and
- the extent to which all students should be encouraged to attend college.

Each view is partially correct. None of them alone addresses the full potential of the child as future adult. If one view is not to dominate and if the disconnected paths of the past are to be avoided, it is important that the various stakeholders be brought together and their perspectives addressed.

To promote a dialogue among the many groups attempting to influence education, the National Governors' Association (NGA) commissioned a paper by Marc S. Tucker, presi-

dent of the National Center on Education and the Economy. Tucker is a primary author of *America's Choice*, a long-time proponent of increasing the emphasis on applied learning, and the author of many works that provide models for strengthening the transition from school to work.

Tucker makes a strong argument for changing the way youth are prepared for work and for including career preparation as a major focus in America's schools. He believes that all students need high academic skills and an ability to use those skills in a productive enterprise. In his essay, Tucker compares this view with the positions of other players in the education arena, discusses the different points of view, and exposes areas of agreement and disagreement.

It is Tucker's fear that the differences among the stakeholders will not be adequately addressed; that school-to-work transition will become yet another program added on to education's burgeoning collection of specialized activities; and that in the end a few students will be given work-based experiences that perhaps lead to careers, but that schools do not change. To ensure that Tucker's fear is not realized, education and training must be linked in meaningful ways to prepare children for future work and adulthood.

NGA also invited representatives of some of the groups Tucker identifies as stakeholders to outline how the goals of their group fit with the goals of school-to-work advocates.

Respondents include Trudy J. Anderson, past president of the National Association of State Directors of Vocational-Technical Education Consortium; W. Norton Grubb, professor of education and site director for the National Center for Research in Vocational Education; Lawrence Perlman, chairman and CEO of Ceridian Corporation and board member of The Business Roundtable; Theodore R.Sizer, founder of the Coalition of Essential Schools; and Donald M. Stewart, president of The College Board. The responses of these authors confirm that thoughtful leaders have different perspectives on the role of schools and how best to prepare youth for adult life.

NGA is publishing this collection of essays as a resource for others to use to promote discussion among the various stakeholders in their states and communities. When these stakeholders are brought together and encouraged to address their differences, a fruitful discussion of goals, priorities, and strategies can ensue in a way that allows the common interests, as well as the real points of disagreement, to emerge. Only by looking at many perspectives, can the nation build a system that prepares all children for life and work.

The Leadership Challenge: Accommodating Different Perspectives on School to Work

by Marc S. Tucker

The School-to-Work Opportunities Act proposed by the Clinton administration is now the law, and the states are working on their implementation plans. The president of the United States, when he signed the bill, made it clear that he does not view this law as providing for yet another federal program. He sees it as ushering in a fundamental change in institutional structure.

But this act of Congress does not buy these changes with large sums of money and enforce them with reams of regulation. It leaves the states great discretion in the way they choose to go about implementing the law. So a great deal depends on how the myriad local groups interested in this legislation see their interests playing out as it is implemented.

The central premise of this paper is that the form the emerging school-to-work transition system will take—as a matter of both state policy and local practice—will reflect, in part, the goals of the interested parties. In varying degrees, these goals are in conflict with one another. My own view is that it is possible to come up with an overall design that will accommodate the goals of most parties to the argument.* Whether or not that is true, state policymakers—the intended audience for this paper—who are designing school-to-work transition systems for their own state will be well-served if they have a picture of the various interests and the context into which they can fit the expression of those interests.

I long ago came to the view that policy proposals for what ought to happen in the future are bound to come to grief if they do not have an accurate grasp of the present, and that one cannot understand the present without understanding the past that produced it. So I begin with a necessarily truncated account of how we got to the present moment.

Setting the Stage

School-to-Work Transition—Old Style

For much of human history, education, skill development, and work were one and all revolved around one institution: the family. The family was the basic unit of economic production and much if not all of what the family produced, it used. As the young grew up, they first observed their parents at work and then, in a measured pace, they took their places alongside their parents as productive members of the society, gaining the attitudes, values, knowledge, and skills they would need to be fully productive along the way. The line between education and training was hard to find. Education, training, and work were interwoven. Not least important, because young people were valued from an early age as producers, they valued themselves. Because the requirements of work were clear, the tests of what it meant to be an adult were clear. When young people met those tests, their accomplishments were celebrated by their parents and the community at large. The transition from youth to adulthood was not necessarily painless. It always included the potential for the worst sort of child exploitation. But, for most youngsters, it was predictable, relatively smooth, and effective.

As organized societies developed, the common folk were taxed to provide for the leaders, who no longer had to grow their own food. Around these leaders, a class of warriors, administrators, and artisans developed. The top strata of this class developed the rudiments of an educational program, delivered by tutors. The artisans gradually coalesced into guilds, which provided for the development of skills in the young by creating a system of apprenticeship in which young people were apprenticed to master artisans, sometimes living with them away from their families while

they acquired the skills of the trade. Thus began a long process through which education and training developed their own separate identities, each with their own institutions and their own professional providers, increasingly separate from each other and the family unit.

The Industrial Revolution and the Mass Production System

The industrial revolution greatly accelerated these developments. As families moved from the fields to the growing metropolitan centers, sometimes to avoid starvation and sometimes to seek a better life, the family progressively ceased to be an effective unit for economic production. The home weaver was replaced by the woolen and cotton mill, the blacksmith by the gun factory. Work was no longer done at home.

But the crucial turning point came with the introduction of mass production. It was an ingenious social invention. The new system was built around complex and expensive machines capable of turning out great quantities of goods of all kinds at an astonishingly low price, replacing a system in which individual artisans turned out custom-made goods one by one at very high prices.

To staff this new system, what was needed was a small group of well-educated and trained managers and professionals, a much reduced body of craftspeople, and a very large group of people who needed only a basic level of literacy and virtually no vocational skills to tend the machines. Within ten years of the end of World War II, this system had evolved in the United States to the point that virtually all large corporations had made a sharp distinction between the salaried workers who occupied the professional, managerial, and senior technical positions and the hourly wage workers who occupied the positions on the front line.

The United States quickly developed a greatly expanded education and training system to meet the needs of the mass production system, which found its expression in the organization of the American high school. This provided an

academic track for those who were going on to four-year colleges and then to occupy the professional, managerial, and senior technical ranks; the vocational track for those who were going on to the crafts and trades; and the general track, half of the total, who were going on to staff the front line immediately following high school. There was consensus, mirrored by the realities of the workplace, that those in the academic track needed to be educated but not trained, until they got to the university; those in the vocational track needed to be trained but not educated; and those in the general track needed only a seventh- or eighth-grade level of basic literacy and no training in vocational skills at all.

The whole system was organized around this unspoken consensus. Students were sorted into these three groups by the beginning of high school and provided with a program appropriate to their needs. There was consensus on another important point, too—that employers could expect the products of this system, at every level, to be job ready.

Employers neither have played nor have been expected to play any role in this skill development system except that of customer. This was not true of the unions. In a holdover from the guild system, some unions, heavily concentrated in the building trades, operated an apprenticeship system in which aspiring tradespeople combined classwork with on-the-job training, working toward a certificate that would fully qualify them in their chosen trade. But this apprenticeship system enrolled people in their mid- to late twenties and had no connection to the schools.

There was a place in this system for everyone but African Americans and Native Americans. All of the immigrant groups had started at the bottom and fought their way into their shares of the ranks. But for these groups, the path upward was effectively blocked.

The Demands of the High-Performance Workplace

In the years after World War II, the international economy has undergone profound change. The mass production system on which both our economic system and our

education and training systems were based were progressively adopted by less developed countries. These countries had increasing access to the same capital and technology and could offer much lower labor costs. No less important, these countries were able to produce widespread basic literacy on a par with—and in some cases exceeding—the literacy levels of our frontline workforce.

Employers in the advanced industrial countries were forced to compete with these low-cost producers or go out of business. If they competed using the mass production model, their only choices were lowering wages, exporting production, or a combination of both. But there was an alternative. People the world over would pay a premium for high-quality goods and services customized to consumer requirements and available immediately. The mass production model, however, was not well-suited to these requirements. Meeting them required a radical reorganization of the workplace.

In the high-performance workplace, the workers on the front line take on many of the responsibilities formerly handled by professionals and managers. They work in teams, each member of which is expected to have the skills required to do the work of all the other team members. Each is expected not to work to tight specifications set by the front office without thinking about the consequences, but rather to solve problems as they arise and contribute to improvements in the design of both the products or services and the processes used to produce them, all with a minimum of supervision. They are, in short, expected to think and act like professionals and, like professionals, to learn whatever it takes to get the ever-changing job done to a high standard.

In the old mass production model, there was a significant division between the front line and the front office, between wage earner and salaried staff, and between professional and worker. One needed an education and the other needed only basic literacy. The demands of the new economy knocked these conceptions into a cocked hat, and with them went the entire conceptual underpinning of the

nation's education and training system. The new economy clearly required a very high level of literacy and technical capacity from virtually everyone, not just an elite. But something else had happened too. Suddenly, and surprisingly, some of the basic features of the *preindustrial* system for skill development looked very attractive. To see why, we need to examine the legacy of a century of education organized to meet the needs of the mass production system.

Where We Are Now

In a remarkable way, the United States had reproduced a key feature of the feudal system of centuries ago, though our rhetoric would have had us believe otherwise. Our economy demanded three classes of workers: the professionals and managers, the artisans and tradespeople, and a yeomanry to occupy the front lines. We had a reasonably efficient system for sorting our people into those streams and providing them with the skills they would need to take their place in the grand scheme.

But we had pulled apart the fabric of that ancient society and all the threads that had bound it together were gone, with nothing in their place. This was painfully true for our young people, all but those headed for leadership positions in the society.

The New Mandarins

For students from well-placed families, the system worked very well indeed. They were given demanding work to do, provided the best of our teachers, and expected to perform well. Motivated by the assurance that hard work in school would pay off in the virtual certainty of occupying the most rewarding positions the society had to offer, they worked hard in school. Their course work was like that of the mandarins in ancient China, far removed from anything remotely vocational, and requiring little in the way of application of the academic knowledge they gained to real-world problems. But the aridity of the curriculum was of no consequence for these students, because their patience was tangibly rewarded if they put up with it. All along the way, their parents made sure they went to the

"right" schools and selective colleges and had all the informal connections they needed to get good jobs when the time came. When these students arrived in the workplace from college or graduate school, their employers would complain with increasing frequency that they grew quickly confused when the real problems with which they were confronted did not yield to their sharply honed but narrow technical skills, that they had little practical sense of the world, and that they were arrogant and expected to rise up the ranks quickly almost as a matter of right. But all of this mattered little to the favored few, because they reaped the rewards of their position anyway.

If we compare the situation of today's students to that of young people in the preindustrial society, we find that, though they can no longer understand what work is by watching their parents do it and can no longer acquire the skills they need to do it by apprenticing themselves to their parents as they develop, their parents still play a key role in making the connections to employers and therefore to work that families have made for thousands of years. As adolescents, they value themselves not because they are producing anything of societal value—they know they are not—but because all the adults in their lives value them highly as the next generation of mandarins.

But the students I have just described are a small minority of all students. The reality for everyone else is very different.

Everyone Else

For the vast majority, those who do not plan to go to a selective college, the high school diploma is the ticket to a college or a job. But the high school diploma requires achieving only a seventh- or eighth-grade level of literacy, showing up most of the time, and not causing too much trouble. In fact, because taking a tough course and flunking it can result in no high school diploma, it makes more sense to take undemanding, vacuous courses and to work only hard enough to get a passing grade. Some of these students are in the lower reaches of the academic track; some

are in the vocational track; and the rest, fully half of all high school students, are in the general track.

In years past, vocational education was in high demand. But enrollments have fallen off sharply in recent years, partly because new state requirements designed to strengthen academic performance have limited the number of vocational courses students can take and partly because it is increasingly the case that status in the society at large now comes only with the baccalaureate degree. In response, secondary vocational educators have now sensibly formed a partnership with postsecondary vocational schools—mostly community colleges—to create a pathway to a college degree—the associate degree—through the mechanism of the tech-prep program for those who want to pursue a vocational education and still get the cache that comes with a college degree. But the fact remains that vocational education enrollments continue to decline around the country.

The greatest disaster, however, has befallen the people who have served as the backbone of the front line in the mass production system—the students in the general track. The statistics tell the story. The great majority of these students leave high school, with or without a diploma, with only a seventh- or eighth-grade level of literacy and virtually no vocational skills. When they do leave, they get unskilled, dead-end jobs for a while. Many then go on unemployment, and then back to the unskilled, dead-end jobs in an endless cycle, finally getting a "real" job with some career prospects only in their mid-twenties, having by that time gained more seasoning but little more in the way of technical skills than they had when they left high school.

For the vast majority of these students, except for the small minority in tech-prep programs, there is little or no connection between what they want for themselves as adults and what school has to offer them, as they see it. Effort in school does not pay off in terms of better job or college prospects. Few of those who wind up in the nonselective colleges have what it takes to get a degree, so that a large majority

drops out along the way. As the new economy becomes more pervasive, the difference in expected lifetime income between those who just finish high school and those who get a baccalaureate degree grows steadily.

Now, let's go back and compare this "neglected majority"—most of our students—with the youngsters who grew up in the preindustrial economy. They no longer know what adults do at work because they do not see them doing it. They have no opportunity to acquire the skills needed to do that work, because they no longer work alongside their parents or anyone else doing real adult work. (We must remember that most work done by adolescents is done in the dead-end jobs I mentioned before, and most of that work is done in places that mostly employ teenagers working under the supervision of other teenagers in workplaces that bear little if any resemblance to the workplaces in which people have real careers.) They have no opportunity to test themselves against the demands of real productive work of value to the society at large and to take pride in meeting the demands of such work. They think of themselves as nobodies because they have no opportunity to demonstrate that they are somebody in the scheme of adult society. And they have no opportunity to acquire the skills that the high-performance workplace will require and all the tangible and intangible rewards that go with having those skills. This is in stark contrast to preindustrial teenagers who knew that their labor was crucial to the success of the family unit economy and could take justifiable pride in their vital contribution to that economy. Today, these teenagers are facing a dead end and they know it.

Those facing the most appalling challenge are clearly the youngsters living in deep poverty in our central cities and impoverished rural areas. Especially for those in the cities, and most especially for black youngsters, the preindustrial model stands as a mockery of everything they know. All around them, on television and elsewhere, are vivid images of good jobs they know they will never get. The best jobs they can hope for are the dead-end jobs at the bot-

tom of the ladder that offer no way out.

Among these youngsters, there are many applicants who will be turned away. Or, there are illegal jobs that generally lead to an early death or jail. Their families can provide neither the skills they need nor the connections to the jobs they want. Their teachers expect little of them and, as a consequence, rarely offer them the opportunity for demanding academic work. Everything in their experience teaches them that no one expects them to amount to anything. They have no reason to invest in themselves or in the values and institutions of a society that shows no inclination to invest anything in them. Nothing could be further from the experience of a youngster in the preindustrial family unit.

The Challenge

We neither can turn the clock back, nor would we want to. But the core features of the preindustrial model I have highlighted are needed now more than ever. We need to recreate an environment in which our young people see the vital connections among education, training, and work that were once so clear. That means rebuilding a system in which young people are motivated to work hard in school because it is apparent to them that hard work in school will pay off by enabling them to acquire the capabilities they will need as adults in every walk of life, both inside and outside the workplace. And it means creating an environment for all of our young people in which they can be somebody, proving to themselves and others that they have successfully met the challenges that will confer on them the status of adults who can hold their heads up in society. And, finally, it means building a learning environment that enables everyone to acquire the deep knowledge and skills they need and apply them to real-world problems, because we now know that interplay is vital to understanding information. It is only when we constantly test our information and process skills against the demands of the real world that we truly know anything, something the ancients understood well and we have long forgotten. But the question is how to do all that in the context of today's

environment, which is so different in every way from that of the preindustrial society or of the mass production economy.

School-to-Work Transition—The Emerging Consensus Model

None of this is news to a small group of thoughtful analysts who have seen the new economy coming and witnessed with growing concern the anguish of the "forgotten half" of our students who have been left behind by that economy. Drawing mainly on the European experience, they have served as advocates for a new system of school-to-work transition lasting for two to four years for the majority of our youth that would begin around the age of sixteen, the primary features of which are:

- combined formal schooling and structured on-the-job training leading to a qualification for which nationally recognized skills standards have been set by the employers in the industry or industries for which the student is preparing;
- curriculum that is intellectually demanding but also requires the student to apply what he or she knows to the kind of complex, real-world problems that will be encountered in the high-performance workplace;
- a curriculum and set of work experiences focused enough to qualify the successful student for entry-level work in a rewarding career line but also broad enough to provide the student with the skills required for real mobility in a rapidly changing job market;
- job experiences that will enable the student to sample a broad field of careers and occupations and, under the guidance of a skilled mentor, acquire both the technical skills and the personal values and habits needed to be successful; and
- classwork that includes both secondary and postsecondary courses that will give the student the experience and the credit needed to continue pursuing a college education as long as he or she wishes.

Four years ago, this agenda, taken as a whole, lived only in the minds of a handful of analysts and in a few communities with visionary

leaders. Two years ago, it had gained enough currency to become a central plank in the platform of the successful candidate for the presidency of the United States. Now it is enshrined in federal legislation. Although it is not without its critics, it has strong support from mainstream educators, the vocational education community, youth advocates, general government, and the business community.

But the broad formulation of this agenda, which has helped propel it to legislative success, may prove to be its undoing when it comes to implementation. This is because the many groups that have joined to support the legislation appear to have quite different agendas when it comes to implementation. And other groups that have not yet been involved may find their interests threatened in the implementation process. To see why this is so, we need to take a look at each of those interests in turn. As we do so, we will find ourselves haunted by history.

School Reformers—Group One

For this group, the central issues in school reform are institutional and structural. The problems to be addressed include negative and even perverse incentives operating on students that rob them of the motivation to succeed in school and on staff to help the students to succeed; low expectations for the mass of students that act as a ceiling on performance; a distinction between the academic curriculum and the nonacademic curriculum that robs the former of any real utility and the latter of intellectual content; a lack of connections to the workplace that dooms the majority of students to a school experience that leaves them unprepared for work and without the connections to employers on which promising careers depend. For this group of reformers, the issue of preparing young people for high-performance work is important, and the consensus agenda fits the bill nicely. This group sees clear standards as an essential tool for student motivation and professional accountability and sees those standards as coming from both within the school and without, welcomes business participation in the educational

process, and is not uncomfortable with economic imperatives for educational reform.

School Reformers—Group Two

There is another group of reformers who see things differently. For them, the central problem is schools that have lost their way: that have failed to identify a strong intellectual core in the curriculum and strip away elements in that curriculum that are not essential to that core; that fail to set high standards for their students, make those standards visible to their students, hold students to those standards, and provide the help those students need to reach the standards. For this group, issues of curriculum and teaching are very important. So far these reformers are in agreement with the reformers in Group One. In fact, their vision of a good school is in most respects virtually indistinguishable from that of the reformers in Group One. But then the paths diverge. For the reformers in Group Two, it is essential that the professional staff in each school set their own standards for their own and the students' work, without interference from the district, state, or federal governments. And, for them, the task of school reform is a task that, in its essence, must proceed one school at a time, because the kind of understandings and commitments needed for success must come from the teachers themselves, and from a process driven by the professional commitments of the teachers and principal in that school, not by outside forces. Group Two is unequivocally opposed to standards that originate in whole or in part outside the school, deeply suspicious of any agenda for school reform driven by the employment needs of the business community, and not at all sympathetic to the idea that schools should, among other things, prepare students for work.

The reformers in Group One believe that only major changes in the institutional structure of public education can bring about change that is real, widespread, and sustainable in contrast to Group Two's approach, which Group One views as requiring the change agents to reform schools one at a time using a labor-intensive, slow, and uncertain process. Group One sees

the development of systemwide standards—though not the only change that is needed—as an indispensable element of a strategy for widespread, systemic institutional change.

Group One sees combining schooling with work as another vital component of a system designed to prepare students for high-performance work. For the reformers in Group Two, the issue of preparing youth for the high-performance workplace is not front and center. Their reactions to the consensus agenda on school-to-work transition is more likely to be determined by the way in which it impacts on the parts of their own agenda that are important to them. Given their commitments, people who share these views can be expected to oppose those aspects of what I have described as the emerging consensus on the school-to-work transition that emphasizes the attainment of standards set by employers, a curriculum designed to meet the needs of employers (no matter how enlightened), and a system that provides a base for a policy structure in which formal incentives for educators are related to student performance.

Public School Educators—Group One

For many educators, perhaps most, the consensus school-to-work agenda has strong appeal on general grounds. They know that they have not been meeting the real needs of many of their students and this hurts. They entered teaching because they care. For those teachers, this agenda offers a real promise of success in an area where they have largely experienced failure.

But this agenda also arouses deep anxieties. Some of its elements have the potential for encountering determined opposition. Few teachers or principals have had any experience of what it is like to be employed in a high-performance workplace. Their image of work on the front line of most workplaces is highly conditioned by the mass production work organization that has dominated American business practice for decades—mindless work in a degrading setting that robs the worker of self-respect. They cannot imagine themselves preparing their students for work in such set-

tings or helping students meet standards set by such employers. So their enthusiasm for the agenda will be conditioned in part by whether they view it as a way to prepare their students for a worthwhile future.

Second, many see the consensus proposal for school-to-work transition as a thinly disguised proposal for tracking students, European style, into such settings, and they describe themselves as unequivocally opposed to such tracking. They see the American system as providing opportunity to everyone, rather than closing off opportunities as they believe the European system does. On this point, these educators must be convinced that the consensus will open opportunities for their students rather than close them off.

Third, conditioned by a century of belief and practice, they are not at all sure that the students who do not go to a selective college can achieve at much higher levels in the academic realm than they have in past; to the extent that the consensus model demands such performance, they have their doubts. On this point, they will need to be convinced that, in a practical world, their students can achieve the high standards envisioned by the consensus proposal.

And last, nothing in their experience—to say nothing of a century of school practice—prepares them for sharing the responsibility for educating and training young people with employers outside the school. Because the model requires them to engage in joint curriculum planning and joint teaching, it can be expected to arouse real anxiety in many and outright opposition from some. The willingness of educators to play this game will depend on how sure they are that the consensus model will make it possible for them to participate with businesspeople as equals, without compromising their professional responsibility to make sure that students are well-educated and not merely well-trained.

Public School Educators—Group Two

Secondary vocational educators and many community college faculty can be expected to take a different view. Both groups have lived

at or near the bottom of their respective status hierarchies in recent years. For the secondary vocational educators, the past ten years have been especially difficult. Following the release of *A Nation At Risk* in 1983, state governments everywhere responded by expanding course requirements in the core academic subjects. The result was that less time was available in most students' schedules to take vocational courses and the status of those courses fell in the eyes of both students and parents. Enrollments fell and the vocational educators perceived themselves as unappreciated, perhaps even endangered, species. The emerging consensus on the need for an effective school-to-work transition in the United States is the first public validation this community has had of the importance of both its clientele and its expertise.

But this does not necessarily mean smooth sailing for the consensus policy and structural prescription. Although they have often sought advice from industry advisory committees, for many years, secondary vocational educators have not had to share responsibility with the employer community for actually educating and training their clientele, preferring to set the curriculum and teach it themselves. The Perkins amendments required the secondary vocational community to begin setting industry standards that would guide its work, a task to which many have responded with energy and imagination. However, having done so, these educators could well be displeased when the new National Skills Standards Board rebuilds the standards in another mold.

Institution by institution, the postsecondary community has always been free to set its own student performance standards and also may not welcome the establishment of national skills standards. Some years ago, the community colleges undertook a farsighted initiative when they reached out to the secondary schools and built the tech-prep system, which offered secondary school students the opportunity to participate in an integrated program of studies begun in high school and completed in community college that would prepare them for rewarding technical careers. These

programs will prove to be a strong foundation on which to build the consensus school-to-work transition system. In its original conception, however, the tech-prep system did not include efforts to move toward national skills standards set by employers or a strong component of structured on-the-job training. In recent years, many tech-prep program operators have begun to include employer-set skills standards along with a structured on-the-job training component. However, many have not, and the requirement to do so may not sit well with them. Still, on the whole, this community can be expected to provide strong support for the consensus model, provided that it can play a strong role in its implementation.

One caveat must be raised. The secondary vocational education community tends to focus on jobs and the requirements of those jobs as defined by a technology that uses job analysis, task analysis, and the development of training modules defined by the task analysis to develop the necessary skills to do those jobs. This technology is derived from a heavily behaviorist industrial psychology tradition that is deeply embedded in the mass production style of work organization and it conflicts at a very deep level with most teachers' views about what it means to be an educated person. Just as serious, it is badly suited to the needs of high-performance work organizations. Vocational educators tend to favor this approach because it naturally produces a description of required skills that can be easily turned into a specification for curriculum. Here again, the shadow of our history is cast over the present and the future. This legacy of the old economy could prove to be a powerful obstacle to the development of the new. There are people within the secondary and postsecondary vocational communities who are aware of this danger and are working to avoid it. Nevertheless, it could lead to an enervating battle within the education community.

Youth Advocates and the Employment and Training Community

This community can be expected to take a mixed view of the consensus model of school-to-work transition. Some of the central players

have been among the most articulate and determined advocates of the need to build an effective school-to-work transition system. They know that without such a system, the "forgotten half" does not have a chance. But it is also true that it is possible to construct such a system and leave out the very youngsters about whom they are most concerned. The idea that the new consensus model would be governed by the high standards demanded by high-performance work looks to some like yet another mechanism for exclusion, as does the idea that the system would require some college for most of its participants.

Among the questions being asked by this community are the following. Why should those who do not qualify for college now qualify for it under the new system? Will those young adults who now leave the education system barely literate be able to participate in this new system and, if so, how? If the educators end up dominating the school-to-work transition system, what should make us believe that they will do any better by disadvantaged kids than they have done in the past? Will standards be used to keep low-income and minority kids out? Who will supply the remediation, second-chance opportunities, mentoring, and counseling these kids will need? How will dropouts and other out-of-school youth participate?

These are not unreasonable questions. History, after all, is on the side of those who ask them, as I pointed out above. Poor and minority children have been left behind by almost every major educational reform—with the exception of Lyndon Johnson's Great Society legislation—for much of this century. In fact, that history has largely been a tale of the steady ascendancy of the college-bound at the expense of the noncollege-bound, with the poor and minorities getting the worst of it all the way. These views are not universal within the community of youth advocates, however. Some within it are well aware that whether or not the standards for high-performance work are made explicit, they are in fact there already, governing the hiring and promotion possibilities for everyone in society. It would

be better, according to these people, to make these standards explicit and thereby bring them within the range of public policymaking, so that public funds and power can be used to right the balance, provided the system can be designed so that poor and minority students can have a fair chance of achieving the new standards. The effect this difference of views will have in the advocacy community will depend in great measure on how the system is actually designed and implemented and whether sufficient funds will be available for this purpose.

Higher Education Community

Apart from the community colleges, the higher education community would seem to have little at stake here. But that may not be the case. In some other countries that have adopted systems similar to the consensus school-to-work model described here, the authorities responsible for setting occupational skills standards have asked why the higher education system taken as a whole should be exempt from these standards. This is not a function of a grab for power, but rather follows naturally from the premises with which we began our discussion of the factors leading to the need for a new school-to-work transition system. Whereas under the mass production system the distinction between jobs requiring higher education and those that do not was hard and fast, the imperatives of high-performance work organization blur those distinctions more with every passing day. Frontline jobs look more like professional work, and professionals are increasingly expected to get deeply involved with frontline work and workers. Jobs that used to require only a high school education now routinely require an associate degree, in part because the actual content of the job is more demanding. And jobs that used to require only an associate degree now require a baccalaureate degree for the same reason. Everywhere we look, jobs bearing the same title require an associate degree in one organization and a baccalaureate degree in another.

As we move toward requirements for frontline workers based not on courses taken and

degrees received but on demonstrated knowledge and skill, it is very likely that employers will extend that approach to jobs that now require a bachelor's degree and more. It is likely that how the higher education community responds will depend on the way those skills standards are framed and its involvement in framing them, issues that have yet to be engaged.

This point leads to another. The consensus model assumes that the school-to-work transition system concludes for most participants with some college credit, credit that positions the student to go on to more higher education. It also assumes that the system includes a strong on-the-job training component. If the current system for transferring credit from the community college to four-year institutions continues to prevail, it will severely restrict the options available to students in the school-to-work transition system if they want their community college credits to transfer when they go on for more education. What credit, if any, will they get for the on-the-job component? What credit will they get for vocationally oriented community college courses when they go on? A serious discussion of these issues when the programs are first designed will surely engage the broader higher education community in the school-to-work system.

Employers

We have very little to go on when we try to anticipate how American employers will react to the consensus model of the school-to-work transition, except for the experience in other countries with similar models and what has happened in some of the small-scale trials in this country.

The first and most obvious point is the one I made when describing our past: employers neither have played nor have been expected to play the role of provider in educating and training youth. Their cost structures do not include provisions for the associated costs; frontline managers do not see the training of youth as part of their responsibility and they do not necessarily have the skills required for the task; typically firms do not have a curricu-

lum ready-made for this purpose; and the wage structure in this country does not provide for a training wage, as it does in countries with established apprenticeship or apprentice-like systems.

Given this history, it would seem reasonable to expect employers to be interested only in providing those narrow, least transferable skills that would be of the most immediate benefit to them, to measure their costs against the short-term economic contribution the trainee could make to the bottom line while being trained, and to avoid getting involved at all if it looked as though getting involved would lead to additional government regulations. This assessment will undoubtedly prove true for some employers, but it is much too simple. To see why, it may be useful to think of employers as varying on three key dimensions: size, the degree to which they are experiencing a shortage of skilled labor at the entry level, and the degree to which they are using high-performance work organizations. And there is another intangible but nevertheless important variable: the degree to which employers are motivated by a concern for youth and their prospects.

Let's take *size* first. Large firms typically have training departments, many of which are staffed with professionals who have worked with young people, are skilled at developing education and training programs to fit their needs, and are motivated to do so. Such firms have the structure and skills to do the job and await only the assent of top management to take on the task and do it well. By contrast, small firms typically have no training department, no professional educators or trainers, and no one who can be spared to take much time to perform these functions.

Small firms face another problem. The consensus school-to-work transition model requires the firm to have someone at the table to jointly design the training model and curriculum with educators and to screen candidates for training slots, arrange a training schedule, and so on. Although a large firm may have staff with the time to devote to such

activities, the small firm often will not, however much it might want to be involved.

The trouble is that it is the small firms, not the large ones, that typically employ recent high school graduates. The large firms wait until these youngsters have established a firm employment record in the small firms before investing in them.

So there are two problems here. For the consensus model to work, the large firms will have to be persuaded to take on young people at an earlier age than they have been accustomed to doing in the past, and the system will have to be designed in such a way that the problems small firms face in providing training slots for young people can be overcome.

Now for the second variable, *the degree to which the firm is experiencing shortages of skilled personnel*. It is no accident that prominent among the pilot versions of the consensus school-to-work transition model now underway in the United States, metalworking companies, hospitals, and printing firms rank high among the employer groups involved. All of these industries are experiencing real trouble in finding qualified young people to fill entry-level positions.

This tells the tale. One of these fields, metalworking, has long been the scene of traditional registered apprenticeships. But the other two have not. All of the expected barriers to employer participation in such systems apparently fade away in the face of the obvious need to create a supply of trained young people that can be filled in no other way. In some of these pilots, particularly in the medical field, the employers involved are paying tens of thousands of dollars a year per trainee to finance their programs, and it is clearly worth it to them to do so given the alternatives. This will not be true in all fields, obviously, but it will be true in many more than might at first seem apparent. The reason is simple—our population is aging and the supply of young people relative to the rest of the population is drying up. In this case, time is on the side of the consensus model.

And now we get to the third variable, *the degree to which the firm is using high-performance work organizations*. For these firms, the entry-level shortages are almost a given, because their initial skill requirements are both different from and much higher than those of other firms in the same industry that organize work along conventional mass production lines. Furthermore, these firms have a particular way of doing business that embraces a unique set of values, attitudes, and expectations, which are often as important to them as the cognitive skills that new recruits bring to the firm. For such employers, the consensus school-to-work transition model will represent an opportunity to share with the schools both the costs and the teaching burden of developing in potential recruits the skills, attitudes, and values they would otherwise have to impart alone, at a cost they themselves would have to bear alone.

There are, of course, some issues for employers that are not very sensitive to the variables I have mentioned. How, for instance, can a firm that is laying off large numbers of adults justify using available funds for a school-to-work transition program? How are firms supposed to take on the costs of meeting this new national need at a time when they are also supposed to be shouldering the costs of mandatory health care benefits? Will employers be in an employer-employee relationship with these young people and, if so, does that mean they will have to bear all the nonwage costs that will entail, such as workers' compensation payments? To the extent that they come from the firms themselves, the answers to these questions will not always rest on a narrow calculation of the immediate benefits to the firm.

This point gets us to the last variable, *the degree to which the firm is motivated by a concern for youth and their prospects*. Do not underestimate the power of this variable. In many of the pilot apprentice-like programs with which I am familiar, this leads the list of reasons why many employers are involved. This is true for both large and small firms. Some of the most enthusiastic participants in,

and supporters of, the new breed of school-to-work transition programs have been small firms. Employers have faces, names, and children of their own. They care. Many have been looking for a way to help and have not found it yet. When they get the chance, they often jump at it, if the barriers to participation can be lowered to a point where they are tolerable.

I made an assumption above that is often made by educators suspicious of the motives of businesspeople—that businesspeople will only be interested in developing in young people the very narrow skills that they will need for specific, narrowly defined jobs. In several countries that I have visited that use a school-to-work transition model based on employer-set standards, it is the employers who are pressing the educators to broaden the skill training standards to include more components that look like education and fewer that look like training standards, not the reverse. This is especially true in those countries in which high-performance work organizations are most widespread. These employers need only look inside their own firms to see that the definitions of individual jobs have an increasingly short half-life. It will not pay them to train their potential recruits for jobs that may not exist in a year or two. They want people who can take on a variety of jobs when they begin and who can learn what is necessary to do the jobs that have not yet been defined as those jobs emerge. But there is a cautionary note here. Much depends on the method government uses to establish skills standards. In those cases in which firms mainly using traditional mass production work organizations dominate the standard-setting process, the outcome I have just described is much less likely.

Unions

Through the years, organized labor has consistently supported education and can be expected especially to support education and training initiatives designed to meet the needs of working families and their children. It is also true that, of all the groups in our society, organized labor knows the most about apprenticeship.

But, as I pointed out before, the registered apprenticeship programs are not designed as school-to-work transition systems: most of those who enroll begin in their mid- to late twenties. The unions that run the registered apprenticeship programs—many of them in the building trades—are suspicious of any effort to create new apprentice-like programs in the occupations they cover because the very term “apprenticeship” is used in this connection to denote a specific set of relationships that were won through negotiations to which the unions were party. It is also true that other arrangements that are allowed to use the same term might lower the value of the highly successful registered apprenticeship programs they now run: their graduates might compete with union labor and thereby lower wages in the field generally. Virtually all unions can be expected to be equally suspicious of proposals to create a system of “training wages” at rates below the minimum wage for participants in school-to-work transition programs and any other proposals that could potentially flood the market with cheap or young laborers who might displace older workers who need their jobs to support themselves and their families.

Here again, we are the prisoners of our history. In many other countries with strong school-to-work transition systems, organized labor enrolls a much higher percentage of the workforce. In those countries, the unions know that they will have a seat at the table in defining and running the system. They also see a strong school-to-work transition system as supplying them with skilled members who can compete effectively in the world economy and support their unions too. Here, because such a small proportion of the workforce is unionized, the unions have no assurance that they will be at the table or that the highly trained people who are produced by the consensus model will not turn out to be competitors of their union members—competitors willing to work for lower wages.

Based on the experience of other countries, we know that the first instinct of unions is to support efforts to improve the skills of young people everywhere. But they cannot be

expected to do so with much enthusiasm if the circumstances are such that their direct interests are threatened by the details of the system proposed.

The Design Challenge for State Policymakers

In politics, of course, one can lead or simply accommodate. Accommodation in this case would imply finding the path through these various interests that would be most likely to offend the fewest and please the most. The temptation of state policymakers will be to build a school-to-work transition system that changes as little of the existing structure for education and skill training as possible. This is because the more that system is challenged, the more opponents might be added to whatever is proposed.

The easiest way to do that would be to decentralize the decisionmaking process down to the local level and then let local politics take over, issuing general guidelines for the process that permitted those with the greatest perceived interest in the outcome to dominate the process by which the local decisions are made. If that happens, the opportunity presented by the School-to-Work Opportunities Act will be quickly squandered as the money is used to support marginal activities, with little or no real institutional change taking place at all.

A worse scenario is that we will get institutional change of the wrong sort. My personal nightmare is that five years from now we will look around and find that nothing has changed for those who are in the so-called academic track, that little has changed for those who are in the vocational track, and that the majority of our students who are now in the general track will be spending half of their junior and senior high school class time in minimum-pay, no-skill, dead-end jobs and earning high school credits for it.

By definition, leadership will require a more imaginative solution, one that responds to the analysis at the beginning of this paper. That analysis cries out for fundamental changes in the core structure of the secondary education

system, changes greater than any made since the end of the first quarter of this century.

But the political problem overall is that there is no powerful organized advocate for the young people who typically enter the workforce right out of high school, whereas there are powerful advocates for the institutions whose interests would be challenged by the necessary changes. If this were the 1960s, when the nation was arguing about how the fiscal dividend—that is, the surplus of federal revenues over expenditures—was going to be spent, then the federal government would have bought the solution with a heavily funded, highly regulated program. That solu-

tion is no longer available, both because the money is no longer there and because the public has become rather cynical about the efficacy of solutions developed in and administered from Washington, D.C.

So, strong leadership at the state and local levels is all that stands between real progress and my nightmare. As I said at the outset, I remain convinced that a truly systemic, fundamental change is not only objectively desirable but also politically and technically feasible. The School-to-Work Opportunities Act provides the occasion: it is up to the states to provide the leadership.

*Such a design is not presented here, however, but in another version of this paper. See Marc S. Tucker, "A School-to-Work¹ Transition System for the United States" (Rochester, N.Y.: Workforce Skills Program, National Center on Education and the Economy, April 1994).

School-to-Work Programs: True Reforms or Tired Retreads?

by W. Norton Grubb

School-to-work programs are the most recent reforms to hit the education system. Policy works of all kinds have designed and blessed the initiative, the U.S. Departments of Education and Labor have begun to spend money on them, and President Bill Clinton has signed the School-to-Work Opportunities Act. With federal funding and state planning underway and the appeal of novelty all around them, school-to-work programs will enter the lists of reforms to be implemented, in some way or another, over the next few years. The big question is whether the changes will make much difference to schools and students, or whether in ten years time they will have vanished, swept aside by even newer reforms and different priorities.

To their partisans—including me, I should say—school to work offers comprehensive reform, with better chances for improving high schools and the preparation of many high school students (and some dropouts) than any other strategy. As defined by legislation, school-to-work programs have three components. The school-based component requires the integration of academic and vocational education, provided in “career majors” that have “coherent sequence of courses,” and it envisions at least a year of postsecondary education to create bridges between secondary and postsecondary education. A work-based component provides work opportunities—ideally in positions with some educative potential—to give students a different approach to learning and opportunities for learning different capacities, including motivation and discipline, than schools can teach. And linkages or “connecting activities” are intended to link the school-based and work-based components so that students are adequately prepared for work placements and so that the lessons of each component are consistent.

The School-to-Work Opportunities Act embodies several other attractive ideas. Unlike other efforts to build “second-chance” programs, it attempts to reform high schools rather than replace them with parallel institutions. The levers for reform include pressure from outside the schools, particularly from the business community and from the demands of the jobs themselves, as well as changes from within schools. It builds upon prior reforms, especially the efforts to integrate academic and vocational education and to link secondary and postsecondary institutions, both embedded in current federal vocational education legislation, through tech-prep programs. The opportunities to develop skill standards and other assessment mechanisms are consistent with the recent Goals 2000 legislation as well as the general movement for accountability. And the school-to-work legislation includes a governing mechanism to back up the claims that this is not just another categorical program independent of other federal initiatives. States can create their own coherent policies that encompass several federal funding sources; seek waivers from federal legislation, if necessary; and combine federal funds with state appropriations and initiatives.

But to others, the noise around school-to-work programs may seem baffling. The underlying problem with the transition between school and employment has been around for a long time, without much progress. None of the elements in school-to-work programs is particularly novel. After all, efforts to integrate academic and vocational education and to institute tech-prep programs are already underway through the Perkins amendments, and the work-based components seem like renovations of work-experience and co-op programs, or perhaps just a relabeling, because so many teenagers already have part-time jobs. Schools have been remarkably resistant to

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other reforms in the past, and those with a little sense of history like to remind us of the pendulum of education reform—conservative trends in the 1950s followed by curricular and pedagogical innovations in the late 1960s and early 1970s, followed by the conservatism of the 1980s, and now the more “liberal” reforms of the 1990s. After all, the last wave of innovation occurred just twenty years ago, when interest in career education and work-experience programs flourished, along with pedagogical innovations like open schools and governance reforms like community control of schools. How can school-to-work programs be prevented from following the same cycle of proposal, enthusiasm, and collapse?

Indeed, even while the school-to-work legislation was being developed, there were early warning signs about cracks in its foundation. The very strength of the school-to-work vision—the combination of several different reforms, all related and supporting one another—is simultaneously a source of weakness, because different reformers can stress one component to the near exclusion of others. And so one can already see the proponents of school-to-work programs taking different directions, each developing a vision that cannot possibly endure.

In many ways, advocates of “youth apprenticeship,” or those relying on the power of the work-based component, have led the movement for school-to-work programs. In fact, early versions of the School-to-Work Opportunities Act sought to replace school-based programs with a work-based apprenticeship-like system. Those emphasizing the role of work in reshaping the education of young people continue to elaborate descriptions of what the work component ought to look like, and the most contentious political battles in Washington, D.C., also have involved the work component—whether it should be paid or unpaid, how to reconcile youth apprenticeships with traditional union-based apprenticeships, and union resistance to lower priced competition.

But elaborating work-based components without reforming high schools probably cannot

work. Apart from the feasibility issues—the question of whether there can be enough high-quality work placements in an era of corporate downsizing and reliance on temporary work—school-to-work programs fit poorly in the conventional, “academic” high school. The curriculum remains dominated by the academic disciplines, the relationships between today’s lessons and tomorrow’s work performance are rarely clarified, and college preparation remains the high-status option. Work placements may fit the interests of individual students, but there are no collective practices in the academic high school that they can relate to—no courses, no programs, no faculty aside from a few marginalized vocational instructors—and therefore little opportunity for reforming school-based learning. A work-based component without changes in high schools offers little more than a rebirth of independent work-experience programs.

Other advocates have placed great faith in external mechanisms of assessment and accountability—certificates of initial mastery, industry-specific skill standards, and other assessments of competencies necessary for employment—as ways of forcing schools to reform. Although these levers are based in part on the use of skill standards in countries with very different employment conditions like Germany, they are consistent with a trend in this country to emphasize outcomes and to establish performance measures as in federal vocational education and job training legislation. Where skill standards already exist—in the licensing requirements for health occupations programs in community colleges, for example, or the Federal Aviation Administration licensing governing aviation programs—they are quite successful in bringing educators and employers together and in creating more organized labor markets for students to enter than those usually found for subbaccalaureate occupations.

But relying on external assessment mechanisms is a difficult road to follow. We went down such a path in the 1980s, after all, as many states enacted exams to assess the competencies of students at various levels. And no

one thinks that these have reshaped high schools significantly, except to increase enrollments in academic rather than vocational courses. There are many practical difficulties to resolve before these assessments are in place. There are questions about what kinds of skills are valuable, whether employers will use tests in hiring, whether tests can be written to encourage alternatives to conventional "skills and drills" instruction, what the relationship is between these and other tests (e.g., requirements for graduation and university admissions), and whether the resulting tests are biased in some way and can weather challenges from advocates for female, minority, limited-English-speaking, and disabled students. It would be foolish to wait for the resolution of all of these questions to begin reform. And external pressures for change are pointless without the capacity of teachers, counselors, and administrators to change or figure out ways to reconcile all the different approaches to accountability. Without integrating skill standards and work-related certificates with other education reforms, they will either die aborning or be ignored by schools, and neither outcome will enhance reform.

Educators themselves are unclear about the role of school-to-work programs. Only those in vocational education—a dwindling number, given the decreasing vocational enrollments during the 1980s, and peripheral in most schools because of the low status of vocational education—have participated in the integration of academic and vocational education and the tech-prep initiatives that appear in school-to-work legislation. Most academic educators have been preoccupied with other reforms—subject-specific changes in math and English, for example, or "restructuring" (whatever that is), or following the principles of the Coalition of Essential Schools or Paideia Schools or some other piper—that have little to do with occupational preparation.

Without a vision of how an occupational focus can reshape high schools for a larger number of students—to include all students, as the school-to-work legislation envisions, and to encompass the academic side as well—

two outcomes are likely, neither of them attractive. One is that schools will generate school-to-work programs for "at-risk" kids, or for the "noncollege-bound"—as Oregon has done in creating a college-bound track and a school-to-work track. This will immediately doom such programs to peripheral and second-class status, rather than serve as springboards with more sophisticated capacities for larger numbers of students. A somewhat similar outcome is a kind of "three-track" approach that has emerged persistently in American education: a small college-bound track for perhaps 20 percent to 25 percent of high school students, the group that now completes baccalaureate degrees; a small, high-quality school-to-work track, with sophisticated academic and occupational content in high school and specialization thereafter in community colleges and technical institutes; and an amorphous curriculum for the remaining 50 percent to 60 percent of students, a continuation of the justly maligned general track.

Without a clear vision of how high schools should change, the most likely scenario is that the great interest in work-based learning and the lack of interest among educators in occupationally oriented education will combine to create the worst of all worlds. Work-experience programs will be supported in high schools that remain much as they are now—dominated by the college-bound track, with no apparent connection to future employment. Such programs will provide some work opportunities for small numbers of students, many of them "at risk," but they will utterly fail to reshape the high school in any important way.

What steps are necessary to avoid this kind of stale reinvention of work-based programs that haven't done much in the past? There are seven questions that those contemplating school-to-work programs must confront, whether they operate at the federal, state, or local level. They are the following.

1. What is the vision of how high schools should change in school-to-work programs?

The school-to-work legislation calls for establishing career majors integrating academic and

vocational content and linking high schools with postsecondary institutions. However, educators need a more complete vision before they—that is, the many teachers and administrators in high schools currently overloaded with recommendations for reform—can change in appropriate ways.

Of course, it is folly to dictate a vision, and given the heterogeneity of schools, states and districts should avoid specifying any one model of high school change. However, in my view, the various efforts now underway to establish career academies, schools with several career clusters or majors, and magnet high schools with occupational focuses, exemplify the kinds of changes that are appropriate. These efforts all make the integration of academic and vocational programs easier, by bringing together groups of academic and vocational teachers around a common purpose. By providing an occupational focus to a high school program, they make transparent the occupational purpose and facilitate the connection to work-based learning and to employers. Such efforts also are consistent with calls to develop "focus schools" with clearer missions, with the interest in more contextualized and problem-focused instruction, and with support for smaller schools (or schools-within-schools) to reduce the anonymity of the large comprehensive high school. Such efforts can transform high schools in substantial ways for the majority of students in ways that are consistent with the dominant strands of school reform.

In these efforts, it is crucial to acknowledge the cycling of reforms in education. Just twenty years ago, the efforts to install work-experience programs and career education were utter failures, and any occupational focus in high schools has been suspect ever since the early years of the century. The twin issues of equity and quality (or "standards") are largely responsible: past efforts have been castigated for reinforcing tracking and for lowering standards, particularly when they have focused on lower skilled positions as conventional vocational education has.

Current efforts can potentially avoid both these criticisms, however. The School-to-Work Opportunities Act emphasizes including all students, not just at-risk students, and providing ways to avoid the inequities often associated with occupational programs and those focusing on the noncollege-bound or at-risk students. Furthermore, the development of schools or schools-within-schools focusing on broad clusters of related occupations—including the highest skilled occupations and related high-level academic competencies, as in health clusters including would-be doctors as well as medical technicians, or manufacturing technologies programs teaching engineers as well as production-line workers—provides a way of focusing on occupations without either watering down content or tracking students away from the highest status positions. And efforts to integrate academic and vocational content need not be narrowly utilitarian or vocational. They present opportunities to include the literature of work, historical perspectives on technology and society, and social studies examining the important public issues surrounding technology, occupational changes, and related economic questions—all ways of linking school-to-work programs with the moral and political purposes of schooling. As John Dewey said in his book *Democracy and Education*, "Education through occupations consequently combines within itself more of the factors conducive to learning than any other method." That is, occupations can provide a focus or context to make more effective the teaching of any of the disciplines included within the high school.

2. What is the vision for the work-based component?

A great deal has been written about the work-based component of school-to-work programs, particularly the need for high-quality placements with real educative potential, as well as about the difficulties of finding enough positions. There is little need for me to rehash these arguments.

However, the broader question implied by the school-to-work legislation also should be considered: What are the responsibilities of

employers in the reconstruction of American education? Within school-to-work programs, these responsibilities are simply to provide work placements of decent quality. But there are wider obligations, given that anything the schools do to improve competencies can be undermined by employers—as happens when employers ignore school performance in their hiring decisions, or when employers structure some jobs to require little skill or rely on large numbers of temporary employees without possibilities for advancement. The larger debate is one that concerns the country's human resources. After all, the preamble to the school-to-work legislation declares its purpose to be to "help students attain high academic and occupational standards," and this implies that employers should have greater responsibility for demanding and rewarding high skills.

3. What are the necessary "connecting activities" linking the school-based and the work-based components?

Although they have not been given much attention so far, adequate linkages between the two components are necessary to prevent school-to-work programs from degenerating into independent work-experience programs, with work disconnected from schooling. In fact, these linkage mechanisms are underappreciated components of school reform. High schools have been attacked repeatedly for their distance from parents, from communities, and from the worlds of employment and politics. Rounds and rounds of parent-participation efforts, community-based options, work-release programs, and political events have been contrived to reduce their isolation. But funding has been rare for linkage mechanisms within the context of a real task to carry out.

Of course, school-to-work programs will require coordinators to recruit and monitor the quality of work placements and to provide liaison between the school and employers. And some of the responsibilities for linkage will fall on employers.

However, many linkage mechanisms will be the responsibilities of schools rather than

employers. The possibilities include improved career guidance and counseling—not, one hopes, the pointless interest inventories and passive transfer of information typical with many counselors, but something more activity-based, better integrated into the curriculum, and shared among a wider variety of teachers and counselors. Related linkage mechanisms might include practice-oriented sessions for students on looking for employment and choosing among work placements; preparation for starting work, so that students have reasonable expectations and appropriate behavior; and seminars for students on the nature and meaning of their employment and its relationship to school-based learning. Some of these are novel and require that high schools rethink their connections to outside organizations.

4. What students will be included in school-to-work programs?

The federal legislation declares that school-to-work programs shall include all students.

Quite apart from the fact that there is no way for the federal government to enforce this requirement, however, this provision is neither simply a question of which students are eligible, nor a prohibition on defining school-to-work programs for at-risk students, gifted students, or some other subset. Rather, this is an issue of what the school component of these programs should look like. If they are developed around relatively low-level occupations, then college-bound students simply won't enroll, and they will become marginal programs by construction. If instead they are pitched at high-tech occupations and require substantial math and science, then low-achieving students will not be eligible unless they are provided more academic support and time. Like some of the current efforts to restructure high schools and integrate academic and vocational education, school-to-work programs provide opportunities to detrack the high school, but this cannot be done without careful attention to the program design, content, pedagogies, and the support services developed for students.

5. *What is the appropriate role for nonschool programs?*

The school-to-work legislation allows funds to be spent on programs for school dropouts and by community-based organizations outside of the schools. Because some of the initial funding for school-to-work programs comes from the Job Training Partnership Act (JTPA) supporting job training for out-of-school youth, the involvement of local private industry councils (PICs) and their state counterparts is necessary and appropriate.

The issue of nonschool programs has both principled and purely self-interested dimensions. The principled question is, How should resources be divided among programs for in-school students and high school reform and those for school dropouts and out-of-school youth? The "turf" issue is much the same, of course, because the division of resources will determine how much educators get to keep versus how much PICs and community-based organizations can spend. In my reading, the school-to-work legislation is principally an effort to reform high school programs, so that the majority of funds—say 75 percent to 80 percent—should be spent on school-based programs. No doubt others will disagree.

Beyond the division of the spoils, the question is, What kinds of programs should be devised for nonschool youth? Although the school-to-work program should be seen as an attempt to reform high schools, it also should be an opportunity to devise more effective programs outside of the schools, particularly because existing JTPA programs have been found to have negative effects on youth. The School-to-Work Opportunities Act provides a model found in very few JTPA-funded programs—I'm thinking particularly of the Center for Employment Training in San Jose and the Young Adult Learning Academy in New York, along with some community college-based programs—that teach academic (or remedial) competencies integrated with job skill training and also provide related employment or work experiences. Experiments with such doubly integrated programs might provide the basis for another round of more effective youth programs.

But the legislation offers yet another opportunity for linking high schools and JTPA agencies that, despite mandates for coordination and coordination set-asides, have never worked well together. Although it will include both schools and job training agencies, the planning process will be hostile to cooperation because of the need for discussions about resources. However, if work placements for specific employers include both in-school youth and dropouts, then linkage mechanisms will force schools and JTPA agencies together. If certain linkage mechanisms—such as seminars preparing students for work placements and those to discuss work issues—are held jointly, then both in-school and out-of-school youth as well as both educators and JTPA personnel could develop common objectives. And, if schools adopt more active and student-centered teaching methods, they might become less forbidding places for out-of-school youth. Although they may be "romantic" notions, they provide a way to view decisions about school-based school-to-work programs and nonschool programs as something other than a zero-sum game.

6. *What role should assessments play?*

Assessment includes skills standards and certificates of initial mastery as well as existing assessments required by states, subject-specific standards now being developed in various subjects, and the requirements posed by college admissions standards, SAT tests, and Advanced Placement tests. This is not the place to discuss the complexity of these issues, but a few problems are central to school-to-work programs. One is that the number of assessments is increasing along with the danger that they will force schools into a crossfire of competing goals. A second is that two contradictory developments are now battling for dominance: one that views assessments as mechanisms external to the schools to force compliance with a set of standards imposed principally by the business community, and another that views assessments as information mechanisms to enable educators to improve their programs locally, without much external coercion.

A third problem is that the use of skill standards and certificates of initial mastery by employers in their hiring decisions has yet to be determined. Employers may not want to use these standards—after all, standards will be nationally developed—but employers hire most of their workers within local labor markets, often based on firm-specific experience rather than on credentials that measure learning. And even if they do want to use these standards and certificates, they may not be able to because they cannot demonstrate the relation between the tests and job performance and may open themselves to the threat of lawsuits. If they are not used by employers to make hiring decisions, these assessments will be both coercive to schools and irrelevant to students. There is also the question of timing: If new forms of assessment take some time to develop, what should school-to-work programs do in the meantime?

The new conventional wisdom is that if conventional multiple-choice tests encourage the wrong kind of teaching, appropriate (or “authentic”) assessments can encourage the right kind of “teaching to the test.” Not only does this require perfection in a new generation of assessments, it also assumes that there can be consensus on the “right” test. In a national system with national programs and agreement on the goals of education, this might be possible. But the school-to-work legislation envisions variation among states and localities. For example, the mechanism for establishing programs explicitly states that variation is allowed. Consensus about education has never been part of this pluralist country, and consensus about skills cannot exist among employers unless we move to a German-style system of occupational standards regulated by government. Because we won’t soon remake either our economic or our educational system along these lines, some modesty is necessary in what assessments can accomplish.

7. What governance mechanism is appropriate for school-to-work programs?

The school-to-work legislation envisions a novel governance mechanism: state agencies collaborate in the development of a coherent

program and seek waivers as necessary from federal legislation and combine federal and state initiatives and funding in ways that create coherent programs. What remains unclear are the details in which the success or failure of school-to-work programs—and other education and training programs that might follow their lead—will reside. Those details include among others the specific powers of a state planning effort, which agency (if any) should be leader, and how restrictive or coercive state policies will be.

The order of these questions is not accidental. It reflects my interpretation of the current school-to-work legislation and its possibilities: that it is primarily a school reform effort where the vision of school change must develop before other elements, lest school to work merely be another add-on to unreformed high schools—another categorical program in the shopping mall high school. The work-based components are important—they’re second on the list—but they cannot be effective in the absence of school reform. This order reflects a relatively modest role for assessments, given the difficulties in developing and implementing them. And by placing the governance question last instead of first, as most political actors would have it, I mean that questions of vision and purpose ought to drive governance instead of having political alignments drive the development of school-to-work programs.

The possibilities for school-to-work programs are enormous. They can offer new learning opportunities for youth and stimulate the reform of high schools, including their reconnection to the world outside. They can raise larger questions that usually get shunted aside about the relationships between school-based programs and programs for out-of-school youth and about the responsibilities for employers. But they also might end up as work-experience programs for a few at-risk students, or as reforms that generate allegiance only as long as federal dollars last, both implying a life expectancy of about five years. The path to true reform is infinitely more attractive and also much more work.

School to Work: The Business Perspective

by Lawrence Perlman

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Marc Tucker has written an important paper about the need to recognize different perspectives toward creating a new system of school-to-work transition for young people in the United States. Clearly, he is correct that the different groups that have come together to support enactment of the School-to-Work Opportunities Act also need to play a critical role in implementing the legislation.

We face an enormous challenge to change the way we prepare young people for the world of work. To a significant degree, future U.S. global competitiveness depends on the skills of those who will be entering the workforce over the next several years.

Tucker writes that this "neglected majority" today leaves school with "only a seventh- or eighth-grade level of literacy and virtually no vocational skills" and that "they have no opportunity to acquire the skills that the high-performance workplace will require." He concludes that our challenge is "to recreate an environment in which our young people see the vital connections among education, training, and work that were once so clear." He has described the task well.

The Business Roundtable has looked at this challenge and made a number of recommendations from the employers' perspective on what the key elements of school-to-work transition programs should be.

- Recognition of the central role employers must play in effective school-to-work transition programs—in the development of standards; in curriculum preparation; in the design of structured work experiences and other school-to-work models; in the certification process; and in the creation of work-based learning opportunities for students.
- Definition of the skills required based on the "customer-driven" approach. In addition

to the basic readiness skills recommended by SCANS,* workforce competitiveness also requires the development of skills needed by high-performance workplaces. The development of these skills should be one element of a broader partnership among business, education, labor, and government to implement the principles of total quality.

- A curriculum that integrates school-based and work-site learning, developed jointly by schools, business, and labor, where appropriate; that will ensure that there are high standards for graduation; and that will ensure that students learn the required skills.
- Businesses, large and small, should become engaged with local education agencies and schools to improve the school-to-work transition process. An effective collaboration between schools and businesses must ensure that transition programs teach students the skills that business needs. In the end, this will be the best incentive for active business participation.
- A system for giving credentials to those acquiring the skills. Ultimately, business will need to make the commitment that where the achievement of these credentials is based on the principles of competitiveness and total quality, such credentials will be a meaningful factor in hiring decisions along with legal considerations and actual job requirements.
- The U.S. government could be a catalyst in funding pilot projects designed to replicate "best practices" and in helping to build capacity at the state and local levels to improve the school-to-work transition and employer cooperation with educational institutions.

With this "employer perspective" as a basis, I would like to comment on the paper's main points and conclusions.

First, I agree that we have an "emerging consensus" for a new school-to-work transition process. Its primary characteristics are well-defined, including formal classroom and structured on-the-job training; a curriculum linked to the demands of the high-performance workplace; work-based learning experiences; and what I call, "employability" training.

What is new is the emerging consensus: the concept is similar to ideas that farsighted political leaders such as Hubert Humphrey, Jacob Javits, and Willard Wirtz were advancing almost twenty years ago. Some of their ideas were incorporated into the Youth Employment and Demonstration Projects Act of 1977. In addition, we have long experience with apprenticeship programs, tech-prep, cooperative education, and other similar programs. Local experience with the 1977 law and other programs may provide valuable lessons for those implementing the 1994 law. They should not be overlooked.

A second point in Tucker's paper that deserves attention is its suggestion that some agendas on school-to-work transition may be irreconcilable. It is important to recognize the congressional intent that this legislation be implemented in a decentralized way through local partnerships among the key participants. Indeed, under the new law, states will award subgrants directly to these partnerships to carry out local school-to-work opportunities programs. This is the hallmark of the School-to-Work Opportunities Act of 1994.

Decentralization in the implementation of the new school-to-work transition process means creativity and diversity in approach. In this sense, there should be no such thing as a "consensus model" per se. Local partnerships of employers, teachers, administrators, and others can build high-quality school-to-work systems that prepare young people for careers in high-skill, high-wage jobs. The best programs must involve partnerships among business,

labor, education, parents, community organizations, and others. This approach distinguishes the School-to-Work Opportunities Act.

For this reason, we need not be overly concerned, at least in the short term, about competing group agendas. I am confident that local leadership will be able to reconcile contrasting perspectives and create coherent processes. We can rely on these evolving relationships to harmonize different perspectives on the school-to-work transition process. Obviously, on a nationwide basis we will not see uniformity. But again, diversity in local partnerships is far superior to trying to design national models in Washington, D.C. It may appear disorganized but only from a top-down perspective. We have to learn to look at programs from the local level out; from this perspective one would see not disorganization but diversity.

Finally, I would like to address the role of employers in helping to implement the School-to-Work Opportunities Act. Clearly, employers must play a central role in successful school-to-work transition programs. They can help define skill requirements, work with schools to design quality classroom experiences, and create learning opportunities linked to the world of work. It is essential, therefore, that educators recognize the contribution employers can make to the success of these programs at the state and local levels and to ensuring that programs are customer-driven.

We should not forget that the beneficiaries of successful school-to-work programs are the students themselves and ultimately the businesses where they will work. Students enrolled in programs with active employer involvement can be exposed to the workplace requirements of high-productivity workteams, total quality management, and new technologies. They also can interact within a diverse workforce. Hopefully, students will have learning experiences that relate directly to the jobs of the future and the demands of employers.

Ideally, the participation of local employers in school-to-work programs can give young peo-

ple an opportunity to learn in high-performance work organizations. They can have an educational experience of workplace "total quality" that includes customer orientation, stakeholder involvement, and continuous improvement for competitiveness as part of the curriculum.

The new law can afford young people a special opportunity to learn about what it takes to be "employable," to understand the modern high-performance workplace, and thus to be empowered to compete. Administrators, teachers, parents, and school boards will need to make special efforts to reach out to local employers—small, medium, and large—to create such opportunities for in-school youth.

As Marc Tucker's paper points out, however, it is very difficult to predict how employers will respond to the invitation to participate in local partnerships. In addition to educators' outreach, therefore, we will need a national employer-led effort to catalyze local businesses to become involved in school-to-work transition processes. Major employers and national trade associations need to make a commitment to marshal business involvement.

The heart of the School-to-Work Opportunities Act is that local partnerships will strive to build bridges between schools and local employers. In some communities, these linkages already exist and local firms are actively engaged with schools in developing school-to-work initiatives. In many communities, the

bridge-building process is only now getting underway. Accordingly, we should not try to prescribe the format for employer involvement. Rather, we should allow local partnerships to develop an expression of business participation that is most suitable to the local environment.

In this sense I disagree with the paper's statement, "The consensus school-to-work transition model requires the firm to have someone at the table to jointly design the training model and curriculum with educators and to screen candidates for training slots, arrange a training schedule, and so on." Local employer involvement in the school-to-work transition process will and should evolve in different ways throughout the United States. It is neither necessary nor advisable from a policy standpoint to seek one standard that defines acceptable employer participation. It was for this reason that the framers of the School-to-Work Opportunities Act deliberately avoided mandating a particular model for local employer involvement.

In closing, I am encouraged that the country is moving in the right direction with respect to creating new school-to-work transition opportunities for young people. They are the key to the future competitiveness of the United States. Improving the transition from school to work for millions of young people is an essential element for enhancing America's long-term ability to compete in the world.

*U.S. Department of Labor, Secretary's Commission on Achieving Necessary Skills, *What Work Requires of Schools* (Washington, D.C., June 1991).

School-to-Work Transition in the United States

by Donald M. Stewart

I believe all students should complete a course of study in elementary school and high school that prepares them for three things: a worthy and fulfilling life as a human being, responsible citizenship in a democratic society, and the capacity to earn a living. If educators and others responsible for designing and implementing school-to-work programs adhere to that philosophy, I am confident the [school-to-work] legislation will have a significant positive impact on the quality of education in our nation's schools and, ultimately, on this nation's competitiveness in a global economy.

I share Tucker's hopes for implementation of the School-to-Work Opportunities Act of 1994. To prepare all students for the high-performance workplace and the emerging economy of the twenty-first century, what we need is not another new or separate set of programs but fundamental changes in American schooling.

At the same time, I share Tucker's "nightmare" of what could go wrong in all of this: looking back five years from now and finding that nothing has changed for students in the traditional academic and vocational tracks, but that the majority of students who are now in the general track are spending half of their time "in minimum-pay, no-skill, dead-end jobs and earning high school credits for it." In short, the legislative vision is one thing, but the devil could be in the details of implementation and of sorting out all the different agendas of the various groups that supported the bill. Will the law's implementation bring real progress, just another kind of tracking, or a new dumping ground for the poor and disadvantaged? For these kids, the future depends upon a candid appraisal of our past and present experience.

Critique of Analysis

State leaders responsible under the new law for designing school-to-work strategies need to understand the concerns of all the interested parties—K-12 schools, higher education, youth and community-based organizations, employers, unions, government agencies and, most important, the students and their families. Each has a stake in this effort. Each has a vital role to play. For this reason, I will focus my comments on Tucker's analysis of the various educational concerns and perspectives involved.

Especially given the dramatic decline in "vocational education" enrollments over the last decade, policymakers must clearly understand the different views of interested parties.¹ This is critical and is where I must suggest the need for a further refinement of Tucker's analysis in three basic regards:

- his description of the nature of the groups with an interest in school to work;
- perceptions of interested parties, working within the economic rationalization that underlies much of his analysis; and
- perceptions of interested parties that question some of the major premises of many school-to-work paradigms.

Groups of Educators on School to Work

The most important "educators" are still parents, and they unfortunately do not enter into Tucker's analysis. Their reactions, their perceptions of what a given program intends for their children, how this compares with the neighboring district, how this affects allocation of precious resources, and how this compares with their vision of an educated person must be taken into account by policymakers. Recent reform efforts that have given short shrift to parents and their organizations

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increasingly litter the school reform landscape. And parental perspectives certainly defy any dichotomous characterization.

I am also not sure whether the distinction between reformers and educators and then the distinction within each of these categories (i.e., Groups One and Two) are the most useful ways to understand the different perspectives of today's educators. Many educators are the reformers, especially where reform is building sustainable improvement. Many who caution against mandating specific standards from outside the school's learning community do not oppose systemic reform but rather know that such mandates usually frustrate systemic reform. I am not aware of many dedicated teachers for whom eventually earning a living is not among their goals for their students. And Tucker's "one caveat" on page 9 raises a significant point of difficulty for vocational educators. Are many of them in fact trained in obsolete technologies but bound to them via certification and curriculum?

Analyzing groups of educators using other distinctions—administration/teaching, central office/school site, suburban/urban/rural, elementary/secondary, early/mid-career/second career, professionally involved/uninvolved, large school/small school, high/low/medium student socioeconomic status—may prove far more useful for policymakers wishing to know the lay of the land on this issue.

Within School to Work

Although welcoming the general reform impulse, educators for whom workplace preparation is their highest priority may still remain skeptical about a new "systemic" school-to-work approach. Why? First, they worry that the information demanded of a successful school-to-work system will not be either funded or possible. They worry that labor markets may change too quickly for training program adjustments, that jobs will exist in a few years that were unimaginable before, and that subregional economies will develop in distinct ways. Each of these trends requires significant and constantly revised data, data the predictive value of which many

economists doubt. Second, with all the shifts taking place in an accelerated international context, is any effort beyond support, counseling, and professional development doomed always to be several steps behind? Is a "system" design realistic? Third, and as Tucker notes implicitly, we must ask whether a "supply-side" approach to the labor market, without corresponding adjustments to the demand side, is an effective public expenditure. This question is especially important given that we have a demand side that is quite distinct in nature and institutional configuration from European equivalents.

The Wider World of Schooling

Nearly all educators will accept the need to prepare students for eventual employment. This is not the same as being comfortable with "economic imperatives for educational reform" or school reform built upon economic rationalism. This discomfort with economic rationalism, which does not correlate well with the group analysis he proposes, involves all varieties of educators for reasons too briefly stated. These reasons include the following.

Hit Me Again, Blame the Victim. Our tendency to use public schooling as the "whipping boy" of economic concerns and to demand of educators the resolution of a millennium's worth of inequities, has left a battered teacher corps in many schools. Many teachers have experienced prior reform impositions that focused on their inadequacies as well as on the deficiencies of their students and student families. Some now enjoy slightly greater professional autonomy in a field largely controlled by those outside their profession and a pursuit not held in high social esteem. They will resent any suggestion that business-minded real-world types will now help them bring about real economically responsive reform. Such resentment even damages our ability to recruit top talent into teaching in the first place. If we truly believe that the qualities of mind we develop depend significantly on the quality of classroom interaction, we cannot take lightly these perceptions; if we do, we may never affect what happens behind closed schoolroom doors. As

Larry Cuban of Stanford University asked recently, with the recent economic upturn, Has anyone lavished praise on the schools for their success? How will those proposing school to work respond?

Rhetoric of Safe Haven? Some educators have not been able to resist a certain cynicism born of the known weak link between schooling and national economic success: other public policies—fiscal, monetary, regulatory, social welfare—certainly have a much greater impact, especially on labor markets. Many of those teaching the most disadvantaged sectors of our population, sectors often very isolated and amidst conditions of enduring economic depression, question whether a supply-side approach signals an avoidance of painfully complex and politically thorny public social responsibilities. One educator told me years ago that she felt the public avoided dealing with difficult problems largely in two ways, by sending the matter to blue-ribbon commissions or to the schools. School-to-work reformers must keep this in mind when using economic rationales with educators.

Denotivating Dualism Amidst an Exciting Revolution. Perhaps the most discomforting result of relying solely on an economic imperative for educational reform is its narrowing effect on the aims of teaching and learning. This happens principally in two ways, first by making a distant, nonsite aim of international competitiveness the dominant goal for fourteen-year-old Susie's American literature course and second by appearing to narrow the purpose of pedagogy to job preparation. Many educators fear that their disadvantaged students, who already live isolated lives, will now be further isolated from any shared intellectual and cultural heritage. We want our children to live multifaceted lives in so many ways, relishing and enhancing our cultural, intellectual, and moral richness. It is the final aim of all our working hours. Teachers find that exceedingly difficult in any case, competing with unfavorable conditions and influences; no, Sally, a deep reading of an Amy Tan novel may not improve your job interview, but yes it can enrich your life. We must be careful not to

make this difficult task for teachers all the more difficult by latching onto economic imperatives as the dominant mission of schooling.

Although too many school-work models betray a damaging dualism, promising to mix apparently distinct realms of the "practical" with the "academic," a quiet revolution has been and is taking place in pedagogy among many educators. Many are quite enthused by the exciting curricular developments based on approaches that refuse to acknowledge the difference between "academic" and "practical." The College Board's experience with its innovative Pacesetter initiative—a new curricular development that integrates academic standards, teacher development, and assessment—promotes a nondualistic pedagogy inspired by recent advances in cognitive psychology and psychometrics. Each course involves active participation by students in the understanding, communication, and application of demanding subject matter, germane to a variety of life situations.

Policy Recommendations

Beyond a critique of Tucker's contribution, let me offer my own list of guidelines for constructive school-to-work reform.

Keep the Options Open—Foster Choices, Not Tracking

Above all, a school-to-work transition system should not lock students into an academic path that forecloses the college option. All students should take rigorous academic courses, and all students should have the opportunity, if they desire, to receive workplace experiences that enhance their academic and vocational development. But no one should be denied the possibility of higher education simply because they choose to enroll in certain courses beginning at the tenth or eleventh grade. College may not be for everyone right after high school, but the option should remain open to all.

According to a recent report from the U.S. Department of Education, almost 90 percent of the new jobs created in the United States between 1992 and 2000 will require postsec-

ondary levels of literacy and numeracy.² Surely no one should be denied a fair chance at securing those new jobs. Both equity and workforce readiness demand that we keep the college path open.

For too long, disadvantaged and minority kids have been held to lower standards and disproportionately tracked into general and vocational programs. Let's be sure that school-to-work programs, or "career-oriented" majors, don't become a new dead-end path for the same groups that have been badly served all along.

Provide Early and Frequent Diagnostic Assessment and Counseling

Awareness of options at an early stage is critical. College Board experience with "Keeping the Options Open: Continued"—a systemic program to help students plan their academic and career path—indicates that ongoing review of students' strengths and weaknesses will enable them to plan their high school curriculum or training so that college and meaningful employment are both viable options.

Diagnostic assessments should begin in seventh or eighth grade and should be the basis for intensive and systematic academic and career counseling throughout secondary school, not just in high school. And diagnosis should lead to intervention, not triage or tracking. New educational technologies can provide alternative paths to the same outcomes: enough know-how to earn a living and enough knowledge to succeed in college.

Provide Second-Chance Opportunities for the Many Who Have Dropped Out of School

Bringing these students back into the mainstream is essential if they are to have access to the preparation necessary for success in work or further education and training. These provisions should include alternative paths to reentry into school alone or strong out-of-school academic and occupational skills development.

Foster Broad Local Coalitions

Given the rapidly shifting demands of citizenship, labor markets, and modern cultural life,

more and more people will need assistance in the many transitions involving school and work. A bilateral school-work approach will lead to frustration: people need assistance in making transitions from school to work, from work to school, and from unemployment to school and/or work. As the experiences of our EQUITY 2000 partner districts make clear, wider social and community factors have to be taken into account. Collaborations among local institutions and sectors give students a consistent message and a rich supportive network for whatever transitions they may be making.

In arguing for an integrated, nontracking system, I am reinforced by almost everything I hear from the business community. Very few employers would argue that secondary schools should train students in narrow skills or prepare them for specific vocations. Employers want high school graduates to enter the workforce with virtually the same academic and social skills and experiences that are desired by colleges and universities. I recently served on a subcommittee of the Committee for Economic Development that issued a report saying in part:

The primary mission of the public schools should be learning and achievement. Schools should solidly ground all students in language and mathematics skills and provide them with a broad base of knowledge such as literature, science, foreign languages, history, social sciences and the arts. Students should be able to use and apply this knowledge. Academic course work for all students should be rigorous and substantial ³

The College Board found the same thing a decade ago. In our publication *Academic Preparation for Work*, business representatives affirmed the same basic cognitive skills as educators had in our influential "Green Book," *Academic Preparation for College*, itself the product of broad collaboration among school and university educators. And as Tucker notes, in other countries where industry is involved in structuring the school-to-work transition, employers are pressing educators to broaden

skill training standards to include more academic components.

The College Board is committed to the goal that all students meet such high standards, and this commitment is the basis for two previously mentioned College Board initiatives, EQUITY 2000 and Pacesetter, that together represent a "push-pull" reform strategy.

EQUITY 2000, a major urban school reform initiative in fourteen districts across the country, is designed to "push" all students toward higher education through intensive math preparation and counseling. Pacesetter is intended to "pull" all high school students toward higher achievement in a broad range of subjects. Together EQUITY 2000 and Pacesetter combine broad policy and community support with exciting curricular and psychometric advances. With such a foundation, students can indeed build bridges into Advanced Placement, higher education, or immediate employment.

As one university administrator noted at a conference of The College Board's Puerto Rico office last March, we must train not only employees but employers, and not just job seekers but job creators. The future of the American workplace will be shaped not only

by the skills of our workers, but by the extent to which those workers can visualize a better, more effective, and more efficient approach to making products and providing services and then transform their vision into new, more productive enterprises. Whatever else it does, our educational system should strive to foster creative thinking and even some risk-taking.

Some historians of education have argued that the marginal role of "vocational education" per se belies the reality of the highly vocational aims of American education generally. If this is the case, and perhaps it is increasingly so in an age dominated by economic rhetoric and labor market insecurity, it may help us understand why many educators resist talk of school-to-work reform. They do not see exciting novelty but rather a more explicit labeling of an already narrowed educational enterprise. And this is their fear, a fear of lost worlds for their charges, a dismal daily drudge that mocks meritocracy with imposed probable destinies. They fear that fitting kids into too tightly sealed "pipelines" will only suffocate opportunity and frustrate a complex and dynamic society's need for flexible sources of creative and humanely intelligent citizens.

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¹It may also be important to note that the percentage of sophomores identifying themselves as being in the vocational track dropped even more dramatically than the number of seniors identifying themselves as majoring in vocational areas.

²Anthony P. Carnevale and Jeffrey D. Porro, *Quality Education: School Reform for the New American Economy* (Washington, D.C.: U.S. Department of Education, 1994).

³Members of the Committee for Economic Development issuing the report included representatives from Mobil Corporation, PepsiCo Inc., Aetna Life and Casualty, Dow Chemical Company, and Honeywell.

School to Work: Some Questions for Marc Tucker

by Theodore R.Sizer

In his brief and usefully provocative essay, Marc Tucker lays out some of the key issues found in the contemporary school-to-work policy discussion. Let me respond from the vantage point of the School Reformers—Group Two, a spot that Tucker, both as a representative of School Reformers—Group One, and as an old and knowledgeable friend, surely expects to find me. I will begin with some assertions and questions.

Schools as we know them do not work very well, and the reasons are not at heart "institutional and structural" as Tucker characterizes them. The problems are, in the first instance, pedagogical: the way we teach and the way we expect children to learn. Institutional and structural change should logically follow the reform of teaching, reflecting its emerging requirements rather than preceding it.

The schools—especially the high schools—rest on "technologies" drawn from a psychology of the 1890s. Not only do they work ineffectively, they defy contemporary research and even simple common sense. This is a hard and unpopular perspective, especially for an educator, but it is true. Putting it explicitly front and center in the school-to-work debate is essential. Let me try to show why, starting with what we know about productive learning and good schooling.

- We learn when we are active and engaged, "doing" important things worthy of our own and our teachers' time. None of us learns well from a steady diet of lectures, the kind of diet provided in most of today's schools.
- We learn in differing ways at different times and at different rates. Standardized routines and strict age grading and assessment thus make little sense, for they fail to meet the needs of the vast majority of students.

Effective schools are adaptive and flexible. They judge a student's achievement by his or her real work, not psychometric tokens of that work, however clever.

- In good schools, there is an efficient and locally appropriate relationship between ends and means and the expectation of the delivery of significant "real" work. Curricula created by those distant from the dailiness of high school are often a reflection of a smorgasbord of political agendas that have little coherence, much less obvious usefulness.
- We work hard when we know that those imposing the work understand us well enough to help us effectively. This level of understanding is impossible with the teaching loads of 120 to 175 youngsters that most public high school teachers face today.
- Top people are attracted to jobs that entrust them with important things. We need to trust teachers—not circumscribe their work by contracts and regulations—in order to attract the best people to the profession.

Many of these elements are found in the best of existing vocational education programs, elements of which many reformers today believe should characterize the "work" side of the school-to-work transition.

- Here one finds "learning by doing" to a fault: the explaining is always in the context of the students "using" what is explained.
- The students progress when they perform effectively, not on the basis of their ages. In fine vocational classrooms, one sees teachers making endless adaptations to the interests and abilities of their students. Without such adaptations, the work could not proceed.
- The utility of the best vocational education is self-evident. The students have a clear sense of why they are studying what they

are studying. There is much work out in the community, on a paid or unpaid basis. The students are "entering" adult life.

- Many vocational programs hold student loads per teacher to fifty.
- Many vocational teachers have wide discretion in what they teach and how they proceed, much of this emerging from local circumstances.

The fact is that effective education for "work" and for "college" is best conducted in much the same way, and therefore we need not make wrenching decisions about career paths for any students during the high school years. There is one school reform agenda, not two (however much advocates insist they overlap), and "the other half"—that group of largely lower income kids left out of the higher prestige academic tracks—and their college-bound cousins are best served by a good general education, not by distinctive educations expensively differentiated for students around age sixteen. Good education is good education—for everybody.

What is required is to face directly the fundamental need to overhaul the way we keep school. Today, with most federal and state legislation, we slide off that difficult ox-goring kind of work. We propose instead elaborate systems to circumvent the central problem of an incompetent manner of schooling and, as a result, we fail to correct it.

One of American educators' most enduring conceits is that they can, through "scientific instruments" "administered" in a limited period of time, predict a student's future and foretell the young person's career. He is bright. She is talented. He is not suitable for college-level work. She does not have the characteristics of a potential Army officer.

Most leaders accept this belief for other people's children. Their own are special, as I learned well during my nine years of service as the headmaster of an independent school. Those who patronize a private school do not want their kids mindlessly lumped in with a pack, and if they find teachers engaging in

simplistic pseudoscientific prognostication, they violently protest. As well they should. Their youngsters are complicated. So are everyone else's youngsters.

So should the country protest. The waste of talent arising from premature "slotting" of people can no longer be tolerated. The evidence of class, gender, racial, and ethnic stereotyping, even within the domain of testing science, needs fresh scrutiny.

Fair education will arise only when all of us treat everyone else's children with the same compassion and knowledge and concern with which we treat our own. Any schooling system that depends on early testing—as some of the school-to-work apparatus does—is highly suspect. A public education designed to open every possible window for every student for as long as necessary is the only democratic education. The elaborate "at or about age sixteen" divergences contemplated in various school-to-work proposals—such as in *America's Choice: high skills or low wages!*¹—even when rhetorically softened with the dictum that "kids can transfer," belie this. Serious academic work—and it is such work that underlies "high-performance work"—requires sustained effort. One cannot duck in and out. All young people should have full shot at it.

In contrast with virtually every industrial nation, most American high school students—60 percent or more—are already in the labor force.¹ One need only go to a fast-food restaurant or into a mall to see them. Many are "at work" but uncounsed in the shadow, often illicit, economy.

The record is clear that the costs of "work" on young peoples' school performance are substantial, but the allure of independence, money, and a place that gives them some freedom and often a modicum of respect is powerful. In the discussion of school-to-work transition, this reality is addressed yet not confronted. The first question for Americans to ask is, Do we want high school to be a full-time occupation for adolescents or don't we? If we do, this will require some wrenching changes, especially for American employers.

Business complains loudly about the need for highly skilled workers, yet for younger people entering the workforce, low-skilled service jobs are the most accessible option. We need to rethink both the opportunities available and how they can be integrated more effectively with those we have within the school aspect of school to work.

Tucker tells us that reformers in Group One believe that the "development of systemwide standards—though not the only change that is needed—[is nevertheless] an indispensable element of a strategy for widespread, systemic institutional change." By contrast, Group Two school reformers, he writes, want "the professional staff in each school [to] set their own standards for their own and the students' work" Group Two is characterized as "deeply suspicious of any agenda for school reform driven by the employment needs of the business community, and not at all sympathetic to the idea that schools should, among other things, prepare students for work."

There is a tangle of issues here.

Who is the business community? In my experience, there is as much diversity of view among businesspeople as among all Americans. "Business" is not just those few good men and women who have chosen to work on education reform. Beyond truisms such as "we want a labor force that can teach itself as jobs change," there probably is little agreement on the details of schooling across the country's enormous business sector.

I know of no public school reformer who wants each school to have unfettered control of everything, including the need for external accountability, or who thinks the world of work is irrelevant to a school's program.

I do know of people involved with charter schools, private schools, and other school choice initiatives who wish the state to stay completely out of the substance of schooling, believing that a process of parental choice for their children's school is a more appropriate vehicle for accountability than what emerges from political or bureaucratic direction. These people believe that a remote political process controlling the school curriculum and stan-

dards is likely to produce skewed, sloppy, and inappropriate education. They believe that their freedom from external constraints and mandates has enabled them to craft more effective and economical schools than those found in the public sector.

We need to ask: Who legitimately sets what standards and to whom is a school properly accountable? The state? The district? The individual school? The parents? A private collective such as The College Board? The federal government or some federally sanctioned commission? American business? Do some authorities set some of the standards, while others set the rest? And who decides which?

Over the last fifteen years, America has experienced the gathering of control more firmly at the state level and, with Goals 2000 (and as earlier proposed by the Bush administration in America 2000), at the national level. Centralized goal-setting is very much in vogue, as it has been in earlier periods of American history. This shift to the "center" has occurred with remarkably little public discussion of the key questions of who has the right to decide the ideas to which each student is exposed in school. Goals 2000 creates a complex system of largely top-down decisionmaking about the substance of schooling and, though all of this is labeled voluntary, the assumption is that federal program dollars will accrue only to those who join. School to work builds on that, indeed depends on it.

The record of goal- and standard-setting at governmental levels far from the real world of schools is not encouraging. For example, the lists of core subjects and the National Education Goals have been changed twice since first bruited in 1983, the changes coming from successful lobbying by concerned groups influential in Washington, D.C. The process of specifying "what students should know and be able to do" has been given to the traditional national associations and organizations. They have come up with massive lists, no two of which have any deliberate relation to each other and all of which largely reinforce the status quo. Predictably, the result is chaos. And without the harsh and telling discipline of

actually having to teach those matters to real pupils, the authors of these well-intentioned lists of goals have no real-world accountability.

Goals, suggested frameworks, and curricula are one thing. Insisting that they be followed and that students will be tested on a centralized authority's view of what is "high standard" is quite another. Tucker's elaborate system first outlined in *America's Choice: high skills or low wages?*, and played out in part in Clinton administration policy, depends on tests given youngsters at roughly age sixteen in order to give direction to each student's further education. The hope is that the existence of such high-stakes tests set by the government will not only well-serve young people but also push reform into being.

Unfortunately, there is very limited evidence that this sort of policy has had the desired effect.² Carrots and sticks work poorly in the educational arena: too many people have little confidence in "the system" and so they ignore it or jimmy it to their own advantage. Further, the kinds of tests that assess those qualities of mastery and competence properly desired by the Group One reformers described in Tucker's paper are only in an early stage of development. As a result, Goals 2000 and its state-level cousins depend on instruments barely on the drawing boards. At this point, the approach thereby lacks elementary legitimacy.

The school-to-work program presented depends on this sort of apparatus. School to work, as Tucker defines it, is a piece of a fascinating and elaborate "system reform" strategy, one powerfully reminiscent of the efforts of the early twentieth century Progressives who

believed that people could and should be channelled and the culture shaped by social systems crafted by the "best and the brightest" and kept as far as possible from politics.

This vision is appealing and neat. Politics, especially neighborhood politics, is messy and often heated and shrill. So is state and federal politics, though it is often cloaked in more grandeur and gentility. My two concerns with the neo-Progressive program are that it will not work and that the process proposed will further erode already battered neighborhood democracy. If the state arrogates most of importance to itself, there is no need for neighborhood responsibility. Democracy suffers and with it public education.

The path to serious reform, including the connection of formal schooling to the worlds of work and college, is and must largely be the slow and dogged effort of persuasion, the bearing of witness, and the placing of trust and substantial responsibility in the hands of parents and students and teachers and local communities.

We must keep school reform focused on the heart of the matter, the ways of learning and therefore of teaching. We must have common high expectations for all students. We must keep schools simple and thus powerful, addressing good education without elaborate programmatic distinctions about likely careers designed from the top. We must keep education as close as possible to families, where authority ought to rest. We must trust the people at every level. And we must have faith that each youngster can reach for the stars, just as we hope our own children will.

¹Ellen Greenberger and Laurence D. Stein, *When Teenagers Work: The Psychological and Social Costs of Adolescent Employment* (New York: Basic Books, 1986).

²Linda Darling-Hammond, "National Standards and Assessments: Will They Improve Education?" *American Journal of Education* 102, no. 4 (August 1994): 480-510.

The Promises and Concerns of School-to-Work Transition

by Trudy J. Anderson

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Tucker's closing statement, "The School-to-Work Opportunities Act provides the occasion: it is up to the states to provide the leadership," is a call for state action of a proportion far greater than that generated by *A Nation At Risk* a decade ago. Although *A Nation At Risk* drew America's attention to the "watered-down" status of the education curricula, the action it spurred came from within state education systems. And that action failed to meet the intended outcomes.

For school-to-work systems to be successfully created, there must be a state-by-state fundamental restructuring of education systems arising from the consensus of multiple stakeholders, many of whom are outside the present education system. Tucker accurately characterizes the stakeholder groups as education reformers, public school educators, youth advocates, the employment and training community, higher education, employers, and unions. But an additional key stakeholder "perspective" also must be engaged: the public at large.

Despite growing public concern that education is in shambles, the pervasive middle-class perspective is that the local community school is adequate. Parents continue to hold the false belief that their local school provides the educational foundation their sons and daughters need to obtain the aspired baccalaureate degree, a goal that only 20 percent to 30 percent will achieve and one that no longer guarantees success. A baccalaureate degree is a laudable goal but must not be the only valued option following secondary school. Change will come only when middle-class America realizes that its children are among the "neglected majority."

State leaders are challenged to articulate the imperative for change, to create the vision for a restructured education system, and to

develop the framework and guidelines that will set a new direction. Tenets of the School-to-Work Opportunities Act—career paths/majors, work-based learning, national industry standards, national curriculum standards, and portable credentials—are elements that must be woven into the state's vision, framework, and guidelines. State ownership of the tenets is essential: they must not be seen as federal mandates.

There are concerns and challenges to be overcome or addressed in designing the restructured systems. And there are promising experiences that the developing state systems can utilize.

Concerns

First among the concerns is the need to eliminate the public school "general track." Several states already have taken action, but many states have not. A state-by-state vision of a system without a general track must be developed. Some stakeholders are not convinced that we even have a general track. This stems from our American aversion to tracking. We often point to the European system, criticized for causing youth to make choices at too early an age, and insist that tracking harkens of a medieval class system of which we want no part.

Admission that there is a general track that is failing the majority of students must be articulated. This will require defining what the general track entails and what will be created in its place. Watered-down science and math courses and lack of relevancy in high schools are the "stuff" of the general track. Less than 10 percent of students currently take a physics course, yet an understanding of basic physics is a skill almost all students will need. In all states, math courses are required for high school graduation, but courses such as general

math, remedial math, and senior review math that students use to fulfill graduation requirements are nothing more than a basic arithmetic review one more time at the high-school level.

Essential relevance in the curriculum can be attained through the development of career paths/majors, but this tenet of a school-to-work system is seen by many critics as "vocalizing" the curriculum. It is vocationalizing and appropriately so.

Vocational education is the successful segment of the educational curricula that delivers instruction in the contextual learning style of the majority of students, and it connects young people with educational and work opportunities beyond secondary school. Regrettably, recent federal vocational education legislation has been tied to special populations of students. To overcome the view that vocational education is only for the less advantaged, the state vision must clarify that career paths/majors provide various exit points from secondary school: options for college, further technical training, as well as transition directly into the workforce.

Tucker's greatest nightmare—"that five years from now we will look around and find that nothing has changed . . . that the majority of our students who are now in the general track will be spending half of their junior and senior high school class time in minimum-pay, no-skill, dead-end jobs and earning high school credits for it" could become reality if the states do not articulate the failure of the general track and identify what will come in its place. Without that change, the success of school-to-work will be no different than the failed response to *A Nation At Risk*.

A second concern is that policymakers will view the School-to-Work Opportunities Act as a "blessing in disguise." States have always called for less federal regulations, and the legislation will not be regulated. However, it requires the development of a cohesive education system or framework with integrated state education guidelines. This poses a state leadership challenge as never before.

In previous education and job training legislation, there have always been multiple sets of guidelines established by federal legislation. In reaction to the overregulation of the past, some stakeholders will desire to implement a school-to-work system without a framework or guidelines, insisting on wholly local-level creativity and empowerment. This is a dangerous view that must be overcome. A school-to-work system requires both a state-level (top-down) and a local-level (bottom-up) structure. Local empowerment can only be achieved if there is a clear state vision, an integrated educational system/framework and guidelines (top-down) that give the necessary direction to empower local education agencies (bottom-up). Empowerment in any high-performance system is achieved only when a clear vision with goals and expected outcomes is defined and accountability measures of performance are implemented.

The new state or local guidelines must incorporate tenets of a school-to-work system for the mainstream of students, develop rigorous competencies/performance standards, and implement appropriate accountability measures. Much of what is envisioned is far from reality. Therefore, it will be incumbent upon the states to define mid-course targets as well as long-range goals to direct the development of the system.

Some constituent groups will demand these mid-course targets, and rightfully so, because there are few existing success models of performance-based educational programs outside of vocational education.

A third cause for concern is the lack of attention to the role of community and technical colleges, a point on which Tucker is relatively silent. If the transition from school to work is comprehensive, providing multiple exit and entry points from and into the formal education structure, college credit must be available for work-based learning. And the responsibility of the community and technical colleges to engage collaboratively with industry and secondary schools in work-site training is a necessity.

A school-to-work system cannot be successful with new educational leadership coming from the public schools alone. Strong education leadership from vocational schools and community and technical colleges at the local level is required to coordinate work-based experiences extending beyond the secondary school. Taking on these added responsibilities will require an expansion in the capacity of many community and technical colleges. Additionally, they must assume the responsibility for adult "bridging" programs to prepare those who have not experienced the rigor of the restructured public school. The role of vocational schools and community and technical colleges must be an integral part of the state's restructured education system.

Development of work-site training opportunities in rural America and the inner cities is a fourth concern. Rural areas have few work sites; inner cities have few work sites providing more than dead-end, low-paying jobs. Designing alternative, rigorous work-based educational opportunities will require creativity. Failure to address the lack of available work sites in the local business community and to create meaningful work-based options will doom school to work for significant segments of America.

Controversies

Although many industries are reinventing themselves as high-performance work organizations, schools and educational structures have much to learn. Empowerment, as envisioned in a high-performance organization, will be misdirected if states fail to create an appropriate environment and foundation of principles required in a high-performance organization. Empowering frontline workers (i.e., teachers) will not succeed if teachers do not understand or share the vision and direction the restructured education system must take. That is a major challenge to the states and to individual districts. Leadership from members of the business sector who have successfully implemented the principles of high-performance organizations will be critical.

Tucker's criticism of task/job analysis is also controversial. Many will suggest that Tucker views task/job analysis as a Tayloristic, industrial-era matrix that categorizes worker skills into standard segments. This is a misplaced perspective. Task analysis is an established, successful means to identify competencies needed in the workplace. The methodology is highly regarded by many in the business sector because of its ability to identify and measure performance levels within industry standards.

Promise

Much can be learned from state experiences in developing tech-prep and youth apprenticeship programs. States such as Kentucky, Oregon, and South Carolina have restructured their systems legislatively. In a March 1993 report of the Manpower Demonstration Research Corporation, promising school-to-work experiences are cited. Among them was agriculture education. Perhaps no curriculum in the American education experience better exemplifies "all aspects of the industry" or "multiple career majors" than this curricula, which embraces student occupational work experience as a key component.

It is up to the states and the new leadership coming from stakeholders within and outside of the traditional education structure to invent the new system. There is encouraging attention coming from economists, journalists, and the business community. Perhaps a measure of the success of state leadership will be when "talk radio" addresses not only the failure of schools, but also the new vision of the restructured system.

About the Authors

Trudy J. Anderson has served as the state administrator of the Idaho State Division of Vocational Education since December 1988. Her responsibilities include state leadership, coordination, and budgetary management of the state's vocational-technical system of post-secondary institutions and secondary schools as well as its adult short-term training and retraining programs and apprenticeship programs.

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Theodore R.Sizer has been professor of education at Brown University since 1984 and was chairman of the Education Department from 1984 to 1989. Formerly dean of the Harvard University Graduate School of Education (1964-1972) and headmaster of Phillips Academy in Andover, Massachusetts (1972-1981), he is the author of several books, including *Horace's School: Redesigning the American High School*, *Horace's Compromise: The Dilemma of the American High School*, and *Places for Learning, Places for Joy: Speculations on American School Reform*.

From 1979 to 1984, Sizer headed a team of researchers for "A Study of High Schools," cosponsored by the National Association of Secondary School Principals and the National Association of Independent Schools. The results of that study were published in three volumes, including *Horace's Compromise*. In 1984 he established the Coalition of Essential Schools at Brown University, which he now chairs. It is a nationwide network of public and private schools actively engaged in thoughtful and comprehensive restructuring. He is also founder and director of the Annenberg Institute for School Reform at Brown University, which was established in 1993.

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At the University of Pennsylvania from 1970 to 1976, Stewart held several positions, including executive assistant to the president,

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associate dean of arts and sciences, and assistant professor in the Department of City and Regional Planning. From 1962 to 1969, Stewart was a staff member of the Overseas Development Division of the Ford Foundation, with assignments in Lagos, Nigeria; Cairo, Egypt; and Tunis, Tunisia, as well as in the foundation's New York office, concluding as program officer in its Middle East-Africa Program.

Stewart is a trustee or director of the Martin Luther King Jr. Center for Nonviolent Social Change; Grinnell College; Teachers College, Columbia University; and the Committee for Economic Development. He is a member of the Council on Foreign Relations and a former chairman of the National Advisory Committee on Accreditation and Institutional Eligibility of the U.S. Department of Education. He also served as trustee and board chairman of the Educational Testing Service and as director and vice chairman of the American Council on Education.

Marc S. Tucker is president of the National Center on Education and the Economy, a nonprofit organization engaged in policy analysis and development, institutional design, and technical assistance in education and human resources. Tucker created the National Alliance for Restructuring Education, the Commission on the Skills of the American Workforce, and with Lauren Resnick, the New Standards project—all initiatives of the National Center on Education and the Economy.

From 1985 to 1987, Tucker served as executive director of the Carnegie Forum on Education and the Economy, a program of Carnegie Corporation of New York. He was principal author of the forum's report, *A Nation Prepared: Teachers for the 21st Century*, which launched what has widely been referred to as the second wave of education reform. Under Tucker's leadership, the Carnegie Forum also established the National Board for Professional Teaching Standards.

Tucker has written numerous works on economic development policy, national policies for education and retraining, and the application of computer-based technologies to educa-

tion and training. He is also the principal author of *To Secure Our Future: The Federal Role in Education* and one of several authors of *America's Choice: high skills or low wages?*, the report of the Secretary's Commission on the Skills of the American Workforce. He is co-author with Ray Marshall of *Thinking for a Living: Education and the Wealth of Nations*.